

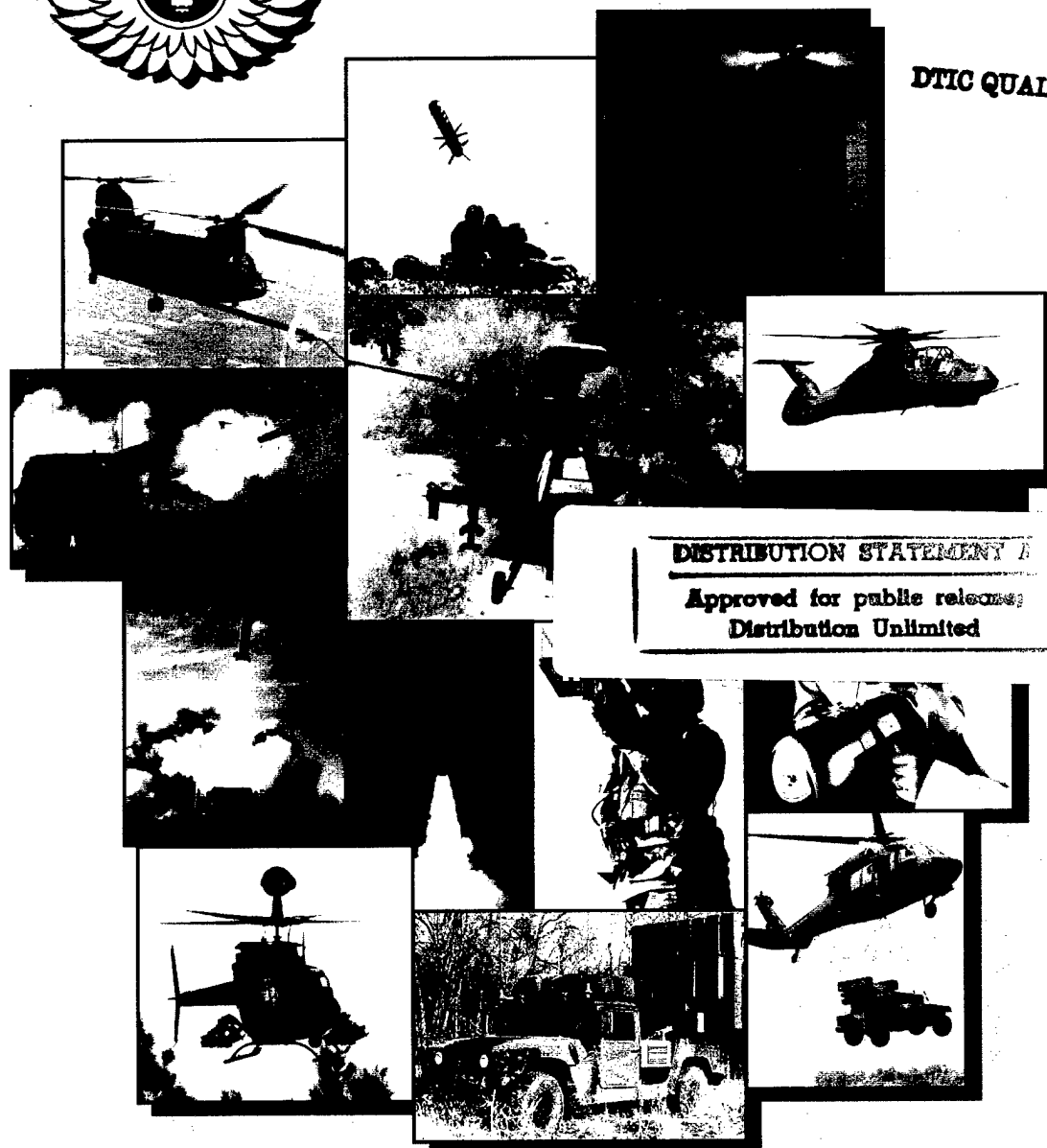
**The Post-Proceedings of the
U.S. Army Aviation and Missile Command
1997 Advance Planning Briefing For Industry**



October 20-22, 1997

**The Sparkman Center Auditorium
Redstone Arsenal, Alabama**

DTIC QUALITY INSPECTED 2



DISTRIBUTION STATEMENT A

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Distribution Unlimited**

Technical Report-RD-TI-01-97

19980115 200

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Distribution Is Unlimited**

Preface

**This Post-Proceedings document contains revisions / additions
to the original APBI Proceedings document distributed at the
APBI on 20-22 October 1997**

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Final Agenda

Welcome

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Program Executive Office for Tactical Missiles (PEO-TM)

Program Executive Office for Air & Missile Defense (PEO-AMD)

Program Executive Office for Aviation

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Aviation RD&E Center - Vision and Strategic Plan

Missile RD&E Center - Contract Opportunities

Aviation RD&E Center -Contract Opportunities

Redstone Technical Test Center (RTTC)

Air Defense Command and Control Systems (ADCCS)

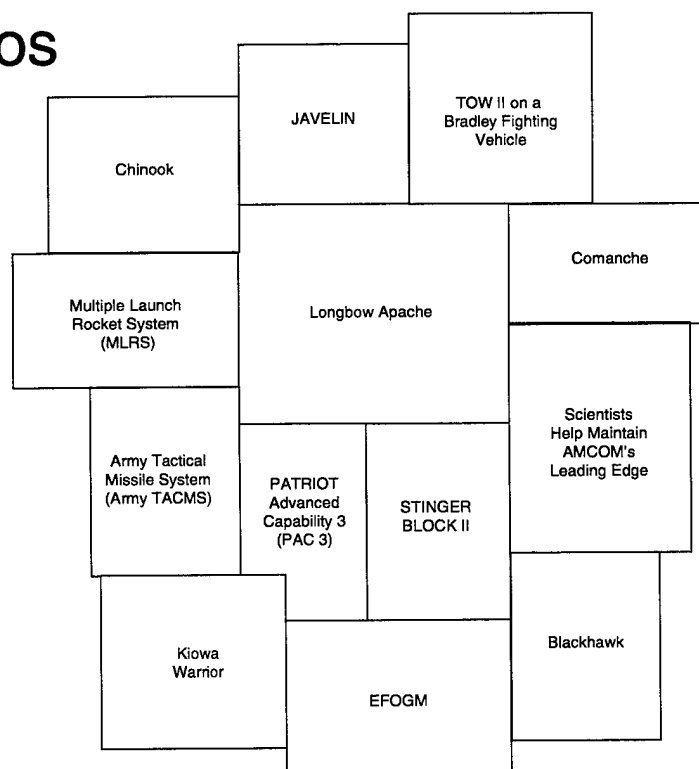
Command Ombudsman

TRADOC Keynote Address

Office of the Assistant Secretary of the Army Research, Development and Acquisition

Attendees

Cover Photos



1997 APBI AGENDA

**U.S. ARMY AVIATION & MISSILE COMMAND
ADVANCE PLANNING BRIEFING FOR INDUSTRY**

MONDAY, OCTOBER 20, 1997

1300 - 1600 **EARLY REGISTRATION - SPARKMAN AUDITORIUM (Bldg. 5304)**

TUESDAY, OCTOBER 21, 1997

- 0730 - **Registration - Sparkman Center Auditorium (Bldg. 5304)**
- 0815 - **Administrative Announcements**
Ms. Tammy S. Williams, Acting Technical Industrial Liaison, Technology Integration Office, Missile Research, Development, and Engineering (MRD&E) Center, U.S. Army Aviation & Missile Command (USAAMCOM)
- 0820 - **Welcome**
MG Emmitt E. Gibson, Commanding General, USAAMCOM
- 0835 - **U.S. Army Aviation & Missile Command Overview**
Mr. John M. Moore, Resource Management Directorate
- 0905 - **BREAK**
- 0930 - **Deputy for Systems Acquisition**
BG Robert E. Armbruster, Deputy for Systems Acquisition
- 1015 - **Program Executive Office for Tactical Missiles (PEO-TM)**
Ms. Vicky L. Armbruster, Deputy Program Executive Officer, Tactical Missiles
- 1100 - **Program Executive Office for Air & Missile Defense (PEO-AMD)**
Mr. A. Q. Oldacre, Deputy Program Executive Officer, Air and Missile Defense
- 1145 - **LUNCH at the Redstone Officers' Club**
Dr. Michael Andrews, Director for Technology Office of the Assistant Secretary of the Army Research, Development, and Acquisition
- 1345 - **Program Executive Office for Aviation**
Mr. Paul Bogosian, Deputy Program Executive Officer, Aviation
- 1415 - **TRADOC Keynote Address**
COL Mark P. Gay, Director, Future Battle Directorate, U.S. Army Training and Doctrine Command
- 1500 - **BREAK**
- 1530 - **Missile RD&E Center Vision and Strategic Plan**
Dr. William C. McCorkle, Technical Director for Missiles, USAAMCOM and Executive Director Missile RD&E Center

- 1615 - **Aviation RD&E Center Vision and Strategic Plan**
Mr. Tom L. House, Technical Director for Aviation,
USAAMCOM and Executive Director Aviation RD&E Center
- 1700 - **Question and Answer Session**
MG Emmitt E. Gibson, Commanding General, USAAMCOM
- 1800 - **Reception - Redstone Arsenal Officers' Club**

WEDNESDAY, OCTOBER 22, 1997

- 0800 - **Announcements**
Ms. Tammy S. Williams, Acting Technical Industrial Liaison,
Technology Integration Office, Missile RD&E Center
- 0805 **Missile RD&E Center Opportunities**
Dr. Paul L. Jacobs, Associate Director for Technology,
Missile RD&E Center
- 0845 **Aviation RD&E Center Contract Opportunities**
Mr. Robert V. Kennedy, Associate Director for Technology,
Aviation RD&E Center
- 0930 - **BREAK**
- 1000 - **Integrated Materiel Management Center (IMMC)**
Richard Turner
IMMC
- 1015 - **Redstone Technical Test Center (RTTC)**
Test and Evaluation Command
Ms. Sharon A. Mueller-Myers, Contracts Specialist, RTTC
- 1035 - **Instrumentation, Targets, and Threat Simulators (ITTS)**
Mr. Henry I. Jehan, Jr. ITTS, U.S. Army Simulation, Training,
and Instrumentation Command
- 1100 - **Redstone Arsenal Support Activity (RASA)**
COL Duane E. Brandt, Commander, RASA
- 1115 - **Resource Management Directorate**
Mr. William G. Matthews, Deputy Director,
AMCOM Resource Management Directorate
- 1135 - **Air Defense Command and Control Systems (ADCCS)**
LTC James M. Althouse, Project Manager, ADCCS
- 1150 - **LUNCH at the Redstone Officers' Club**
Mr. Laurence H. Burger, Director, U.S. Army Space and
Missile Defense Command's Space and Missile Battle Lab
- 1340 - **Acquisition Review**
Ms. L. Marlene Cruze, Director,
AMCOM Acquisition Center

- 1400 - **Legislative Initiatives**
AMCOM Legal Office
- 1420 - **BREAK**
- 1450- **Command Ombudsman**
Mr. John W. Finafrock, AMCOM Ombudsman
- 1510 - **Small Business Office**
Mr. John F. Nelson, Small Business Advocate,
Small and Disadvantaged Business Utilization Office
- 1530 - **Question and Answer Session**
Dr. William C. McCorkle, Technical Director for Missiles,
USAAMCOM, and Executive Director Missile RD&E Center



Welcome
MG Emmitt E. Gibson
Commanding General, USAAMCOM



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U. S. Army Aviation and Missile Command



MG Emmitt E. Gibson

Commanding General

**U. S. Army
Aviation and Missile Command
Redstone Arsenal, Alabama**



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BRAC 95 THE DECISION

8 SEP 95 - BRAC List Approved by Congress

"Disestablish Aviation-Troop Command (ATCOM), vacate its leased facilities, and relocate its missions/functions:"

Align
troop
support
function
with
SSCOM
CECOM
TACOM

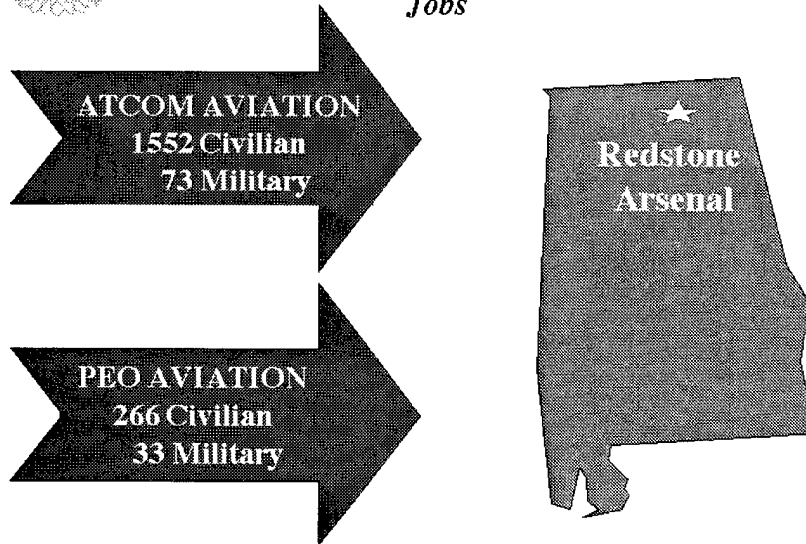
- 1) Relocate Aviation RDEC, Aviation Management, and Aviation Program Executive Office (PEO) structure to Redstone Arsenal, Huntsville, AL to form the Aviation and Missile Command
- 2) Relocate functions related to soldier system to Natick RDEC, MA, to align with Soldier Systems Command (SSCOM)
- 3) Relocate functions related to materiel management of Communications-Electronics to Ft. Monmouth, to align with the Communications Electronics Command (CECOM)
- 4) Relocate functions related to materiel management of automotive to Detroit Arsenal to align with Tank-Auto & Arm Command (TACOM)"



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WHERE WE WERE

Jobs



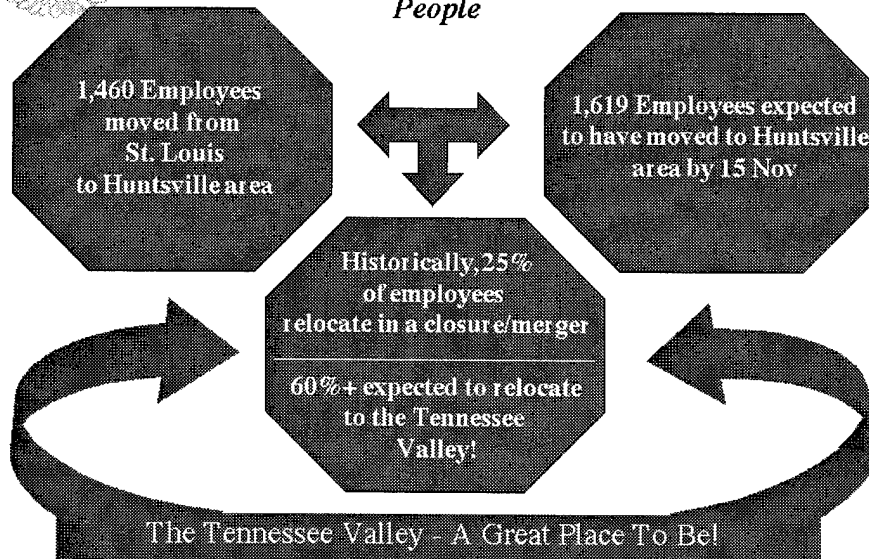
3



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WHERE WE ARE

People



4



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A HUNTSVILLE WELCOME!



6



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THE AMCOM VISION

- **The Army's 21st Century leader in equipping and sustaining technologically dominant aviation and missile systems.**
- A total force of quality soldiers and civilians dedicated to:
 - » A flexible environment where people achieve full potential
 - » Consistently exceeding customers' expectations
 - » Teaming with our customers, industry, and the community
 - » Providing world class support to our ultimate customer -- the soldier

6



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AMCOMMISSION

*Develop, acquire, field, and sustain aviation
and missile systems -- united with program
managers, industry, and other partners -- to
guarantee the Army's technological superiority
on the battlefield.*

7



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SUPPORTING AMERICA'S SOLDIERS

AMCOM!

Our Mission Is To Provide the Soldier With:

→ Leading Edge Technology

Army Aviation and Missilery Remains at the Forefront of Innovation, Change, and Technological Overmatch in Response to the Challenges of Force XXI, Vision 2010 and Army After Next. Today's Modernization is Tomorrow's Readiness.

→ Parts To The User

- The Right Part
- In The Right Place
- At The Right Time
- In The Right Quantity
- At a Reasonable Price

Aviation - Missiles
TMDE



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MISSILE EQUIPMENT SUPPORTED BY AMCOM



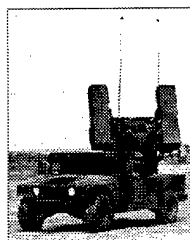
MLRS - 513



TOW 2 HMMWV - 789

FORCE MOD	1928
NON-FORCE MOD	6379

TOTAL	8307
-------	------



AVENGER - 576



DRAGON - 4290



MMS-222



PATRIOT FB - 50



HELLFIRE - 557



TOW COBRA	353
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FISTV	702
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G/VLLD	180
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PATRIOT CC	10
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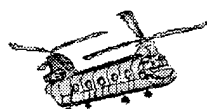
LSDIS	32
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BSIF	33
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AVIATION EQUIPMENT SUPPORTED BY AMCOM



431 - CH-47D



587 - OH-58A/C



60 - MH-60



272 - OH-58D



1416 - UH-60

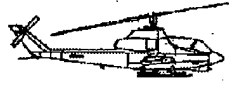


758 - AH-64



35 - MH-47

47 - MH/AH/OH-6



480 - AH-1



RAH-66
PROTOTYPE

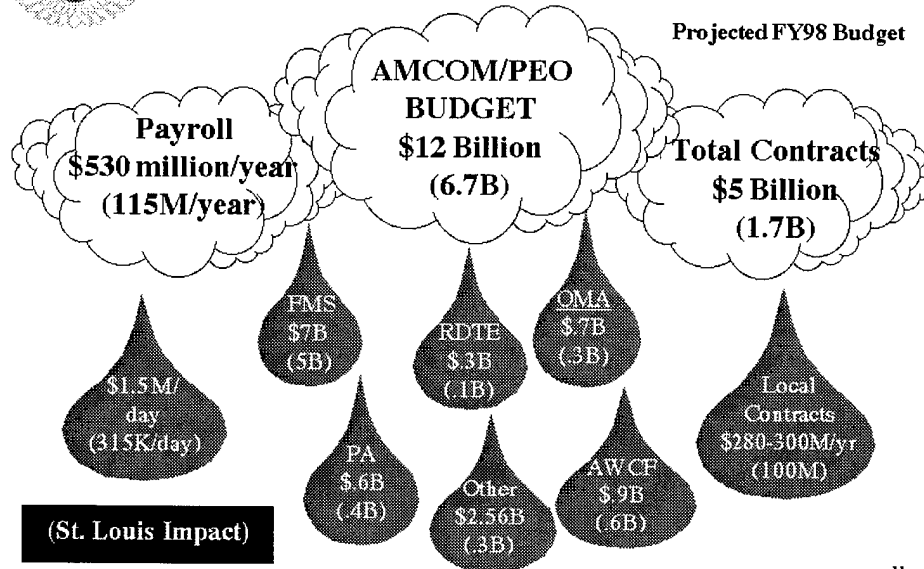
255 - FIXED WING



FORCE MOD	2877
NON-FORCE MOD	2360
FIXED WING	255
SOA	142
TOTAL	5634



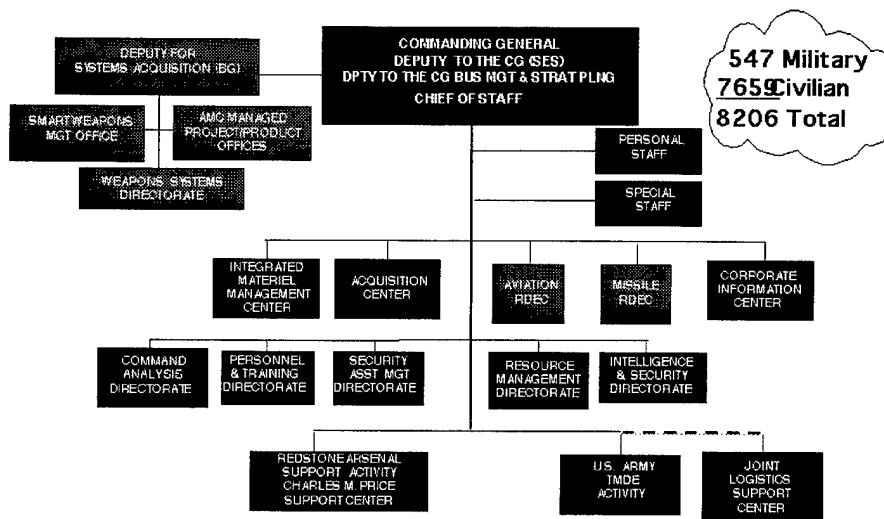
1997 Advance Planning Briefing for Industry **ECONOMIC IMPACT**



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1997 Advance Planning Briefing for Industry **AMCOM** **Redstone Arsenal, AL**

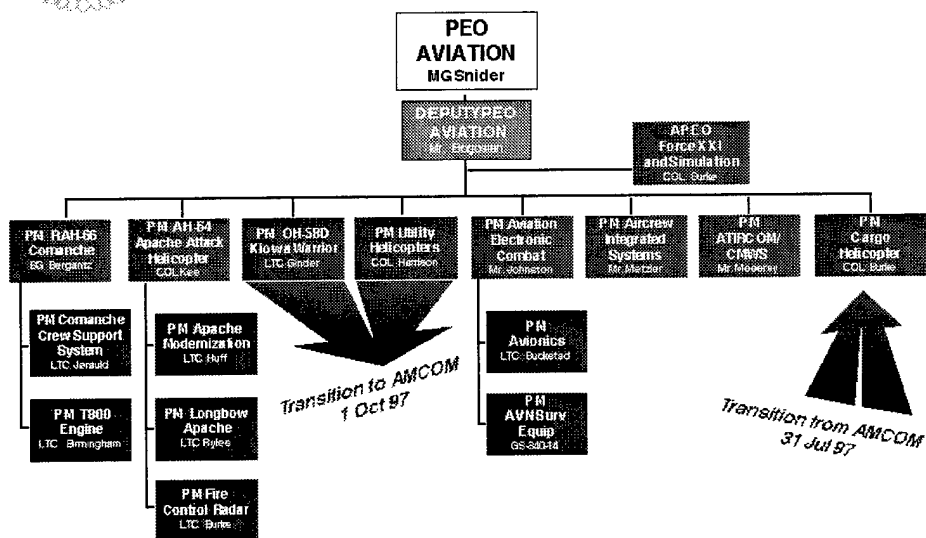


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PEO AVIATION

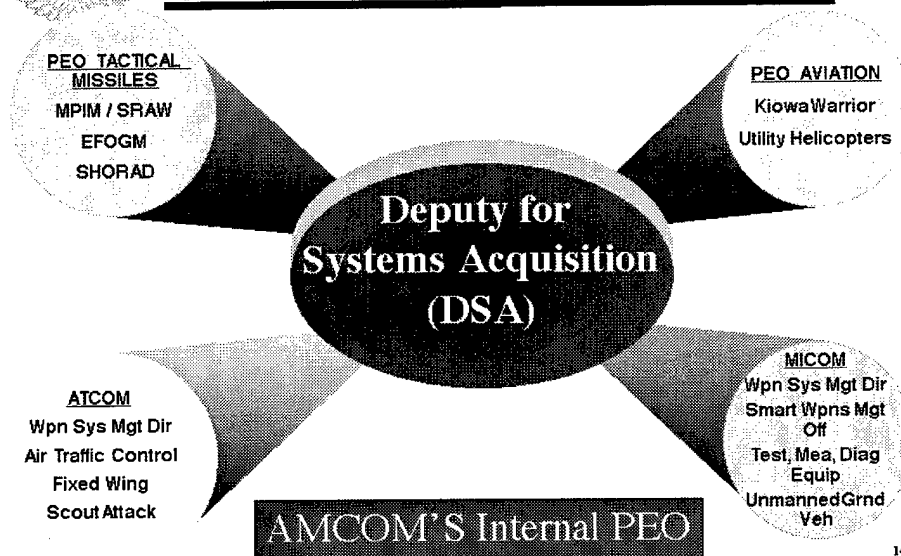


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CONSOLIDATING AMCOM'S PRODUCT & PROJECT OFFICES

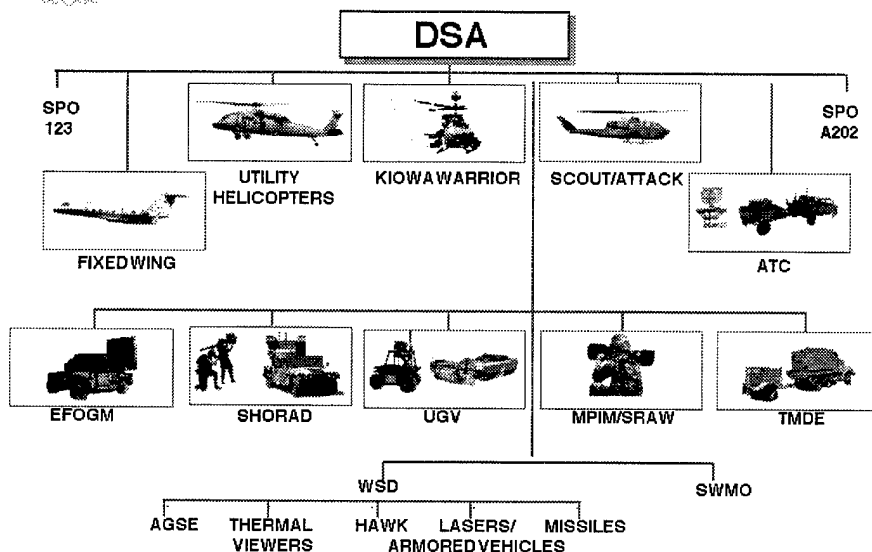


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1997 Advance Planning Briefing for Industry

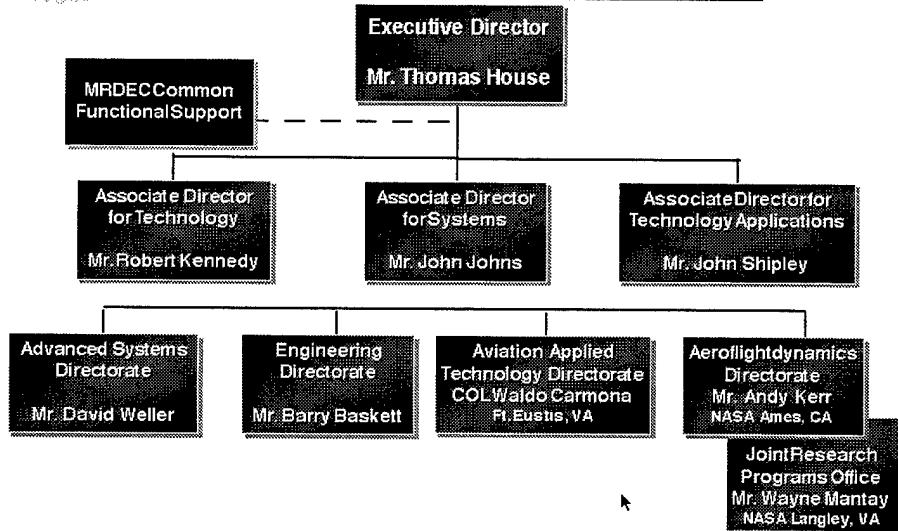
DSA ORGANIZATION



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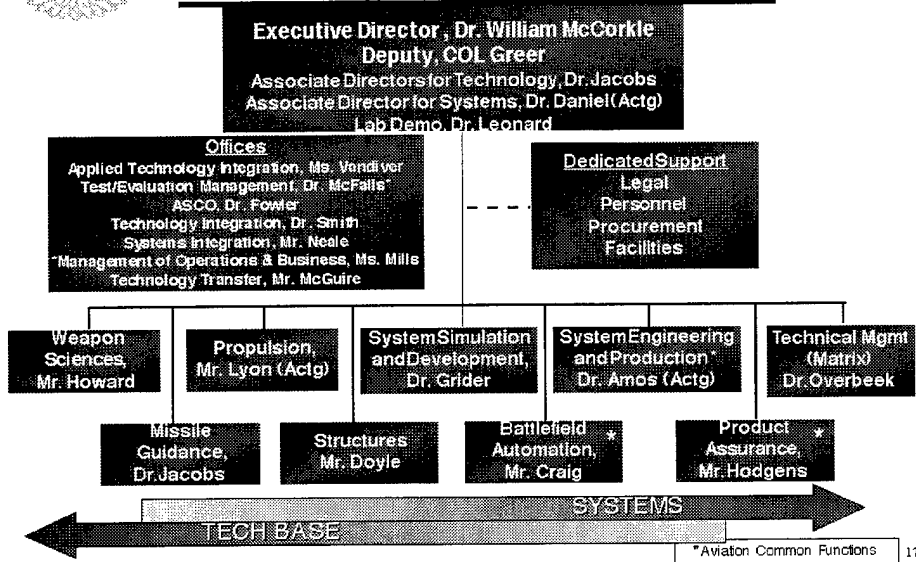
1997 Advance Planning Briefing for Industry Aviation Research, Development and Engineering Center



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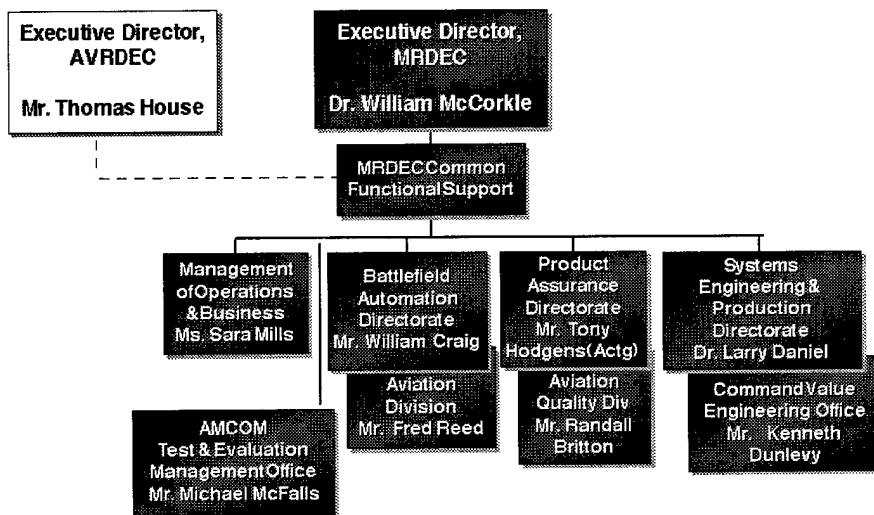
1997 Advance Planning Briefing for Industry Missile Research, Development, & Engineering Center



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1997 Advance Planning Briefing for Industry MRDEC Common Functional Support to the AVRDEC



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*1997 Advance Planning Briefing for Industry
Presentation Schedule*

*U.S. Army Aviation & Missile Command Overview
Deputy for Systems Acquisition
Program Executive Office for Tactical Missiles (PEO-TM)
Program Executive Office for Air & Missile Defense (PEO-AMD)
Program Executive Office for Aviation
TRADOC Keynote Address
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Acquisition Review
Legislative Initiatives
Command Ombudsman
Small Business Office*

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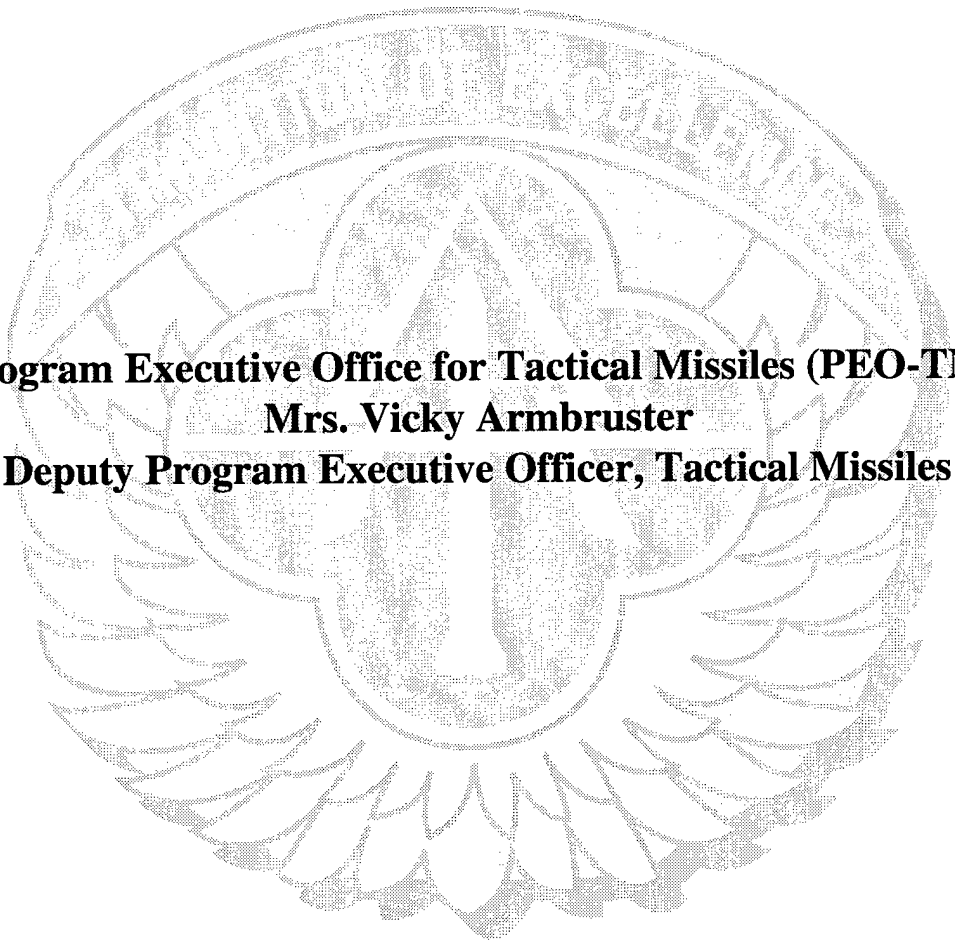


DEPUTY FOR SYSTEMS ACQUISITION


**1997
Advance
Planning
Briefing for
Industry**

***1997 ADVANCE PLANNING
BRIEFING FOR INDUSTRY***

***OCTOBER 1997
BG ROBERT E. ARMBRUSTER***







The seal of the Department of Defense is a circular emblem. It features a central shield with a stylized eagle and a sword. The shield is surrounded by a wreath. The words "DEPARTMENT OF DEFENSE" are inscribed around the top inner edge of the seal.

Program Executive Office for Tactical Missiles (PEO-TM)
Mrs. Vicky Armbruster
Deputy Program Executive Officer, Tactical Missiles

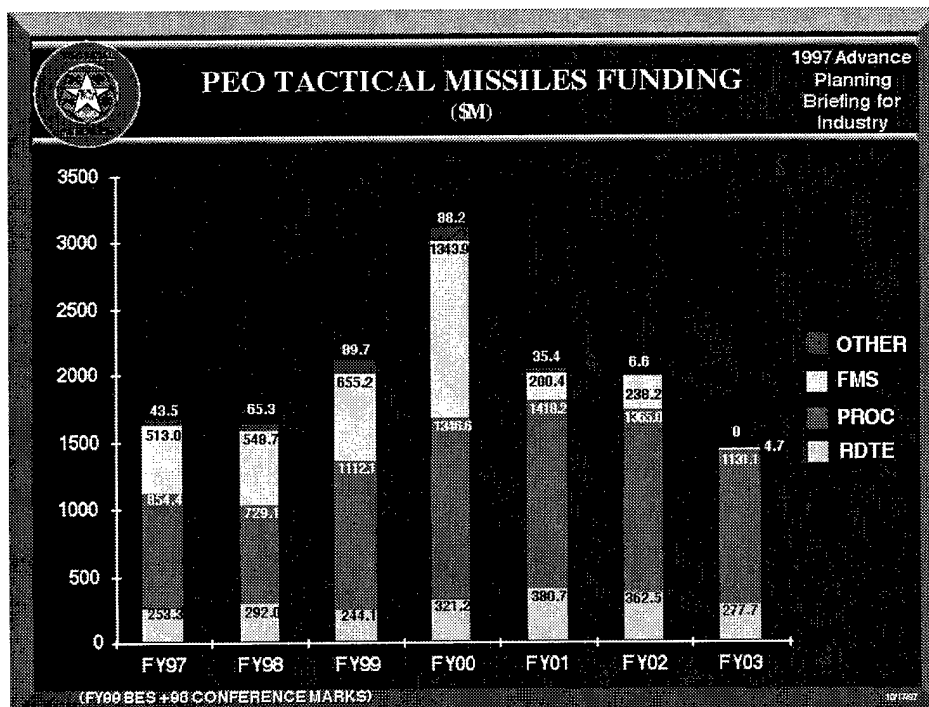


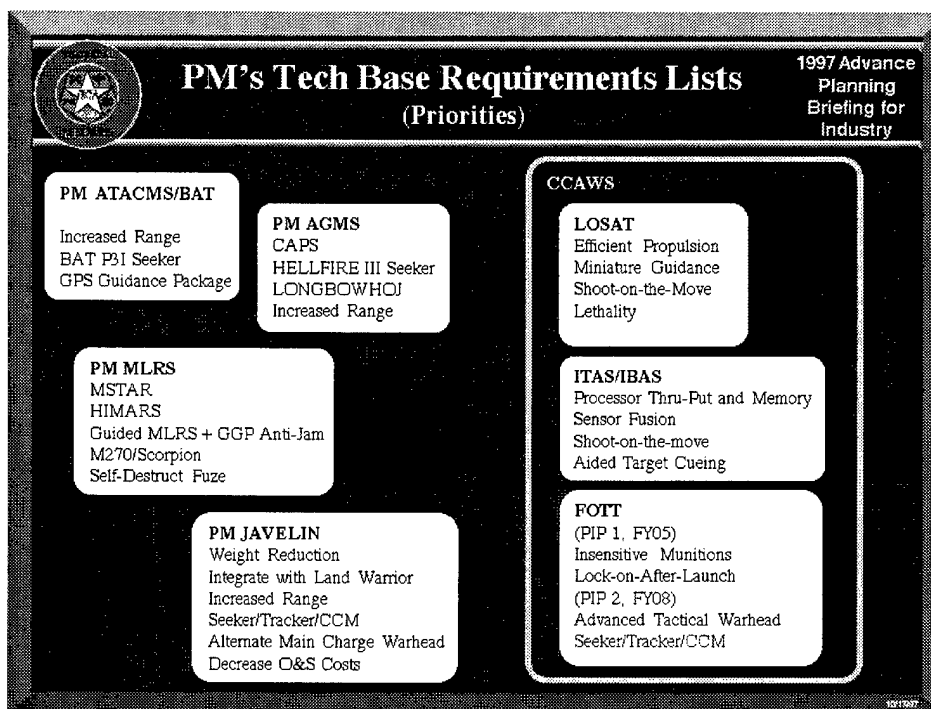
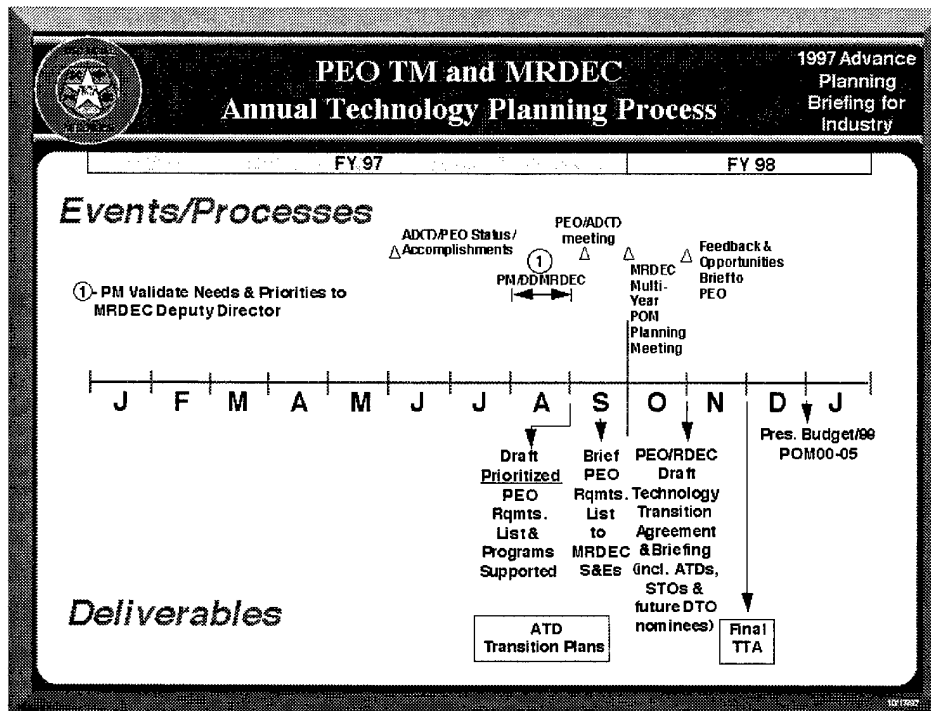
1997 Advance
Planning
Briefing for
Industry

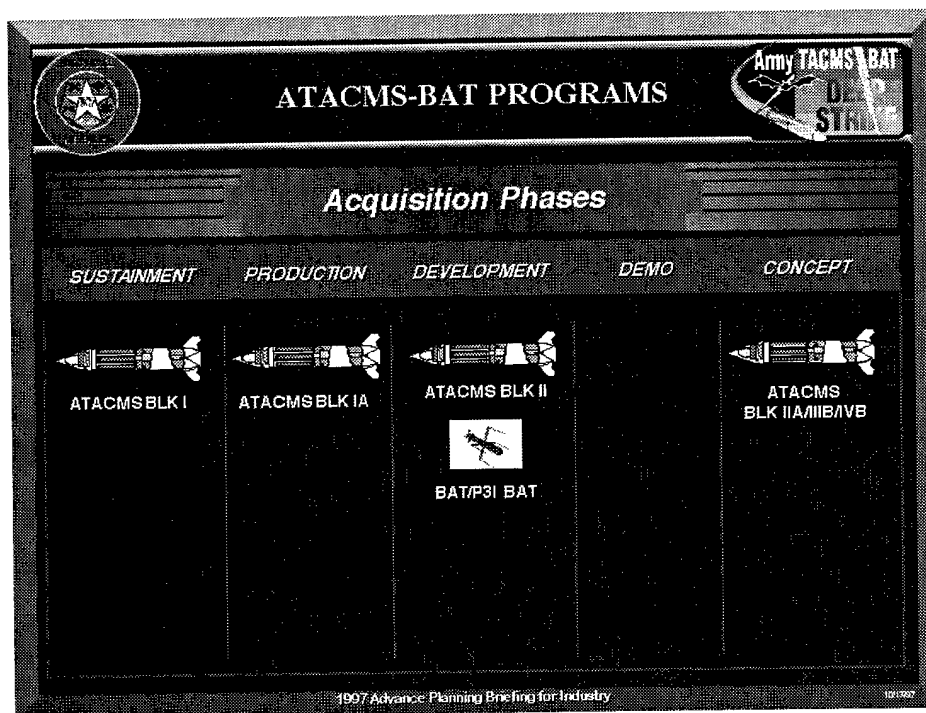
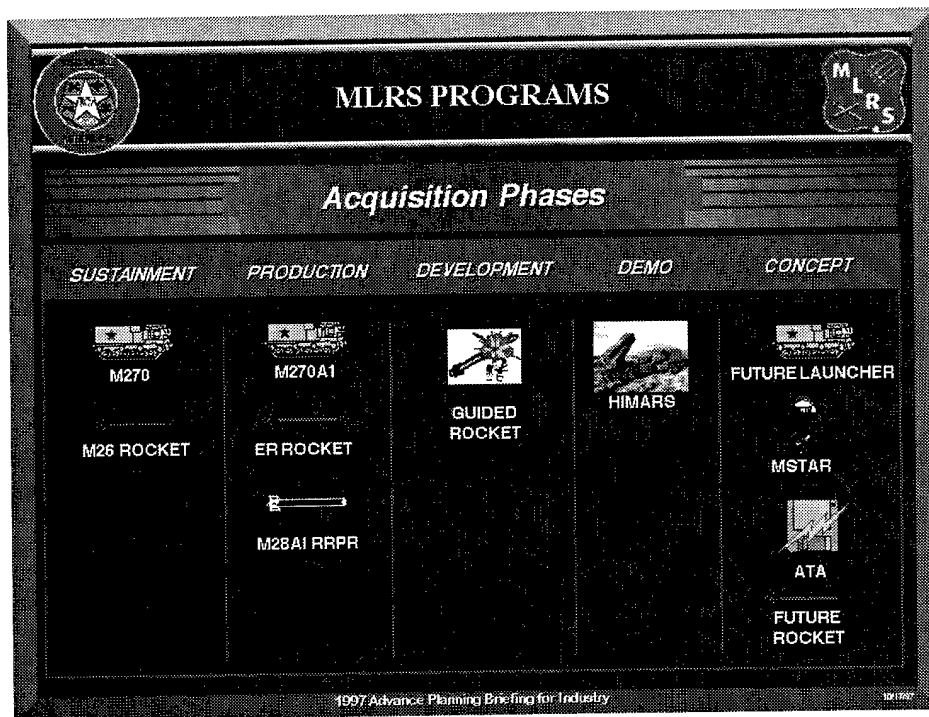
MRS. VICKY ARMBRUSTER
DEPUTY PROGRAM EXECUTIVE
OFFICER, TACTICAL MISSILES

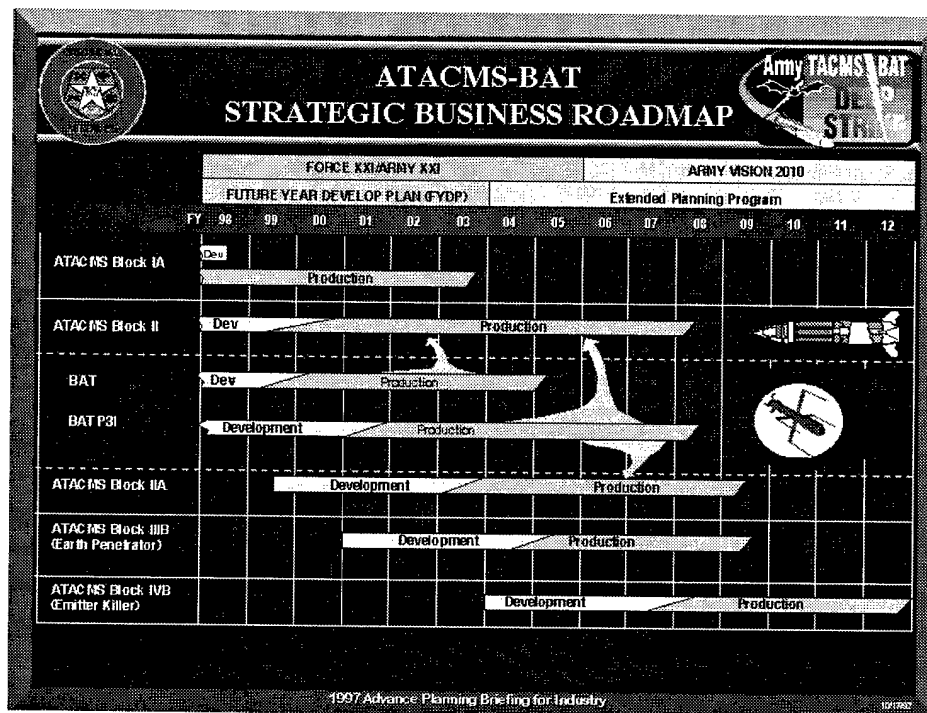







10/1/97





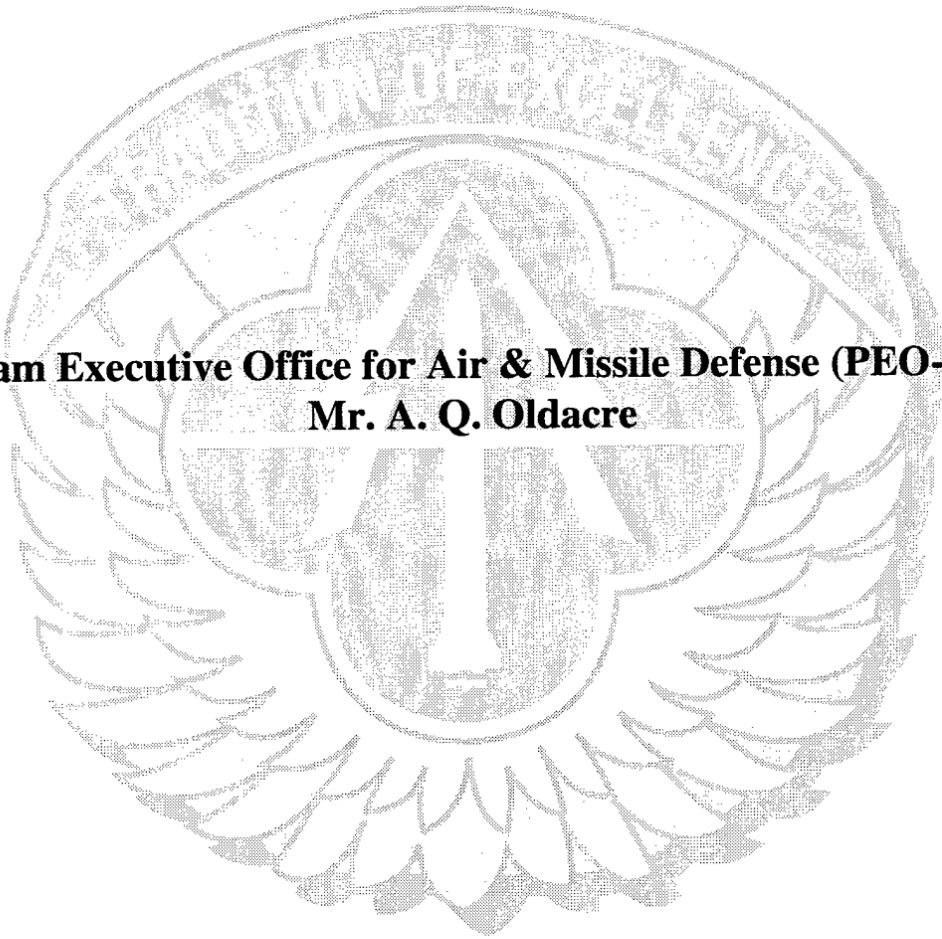




FY 98 CONTRACTS

TITLE	TYPE OF CONTRACT	RFP RELEASE	AWARD DATE	APPROX VALUE (\$)	KIND OF AWARD
BLOCK II IOT&E OPTION (IF EXERCISED)	CPIF	N/A	2QFY98	19.4M	SOLESOURCE: LMVS
BLOCK IIA EMD	CPIF	4QFY98	3QFY99	TBD	SOLESOURCE: LMVS
P3I BAT ENGINEERING & MANUFACTURING DEVELOPMENT (45 MONTHS)	CPIF	2QFY97	1QFY98	TBD	SOLESOURCE: NGSID

1997 Advance Planning Briefing for Industry | 1017007



Program Executive Office for Air & Missile Defense (PEO-AMD)
Mr. A. Q. Oldacre

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1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY



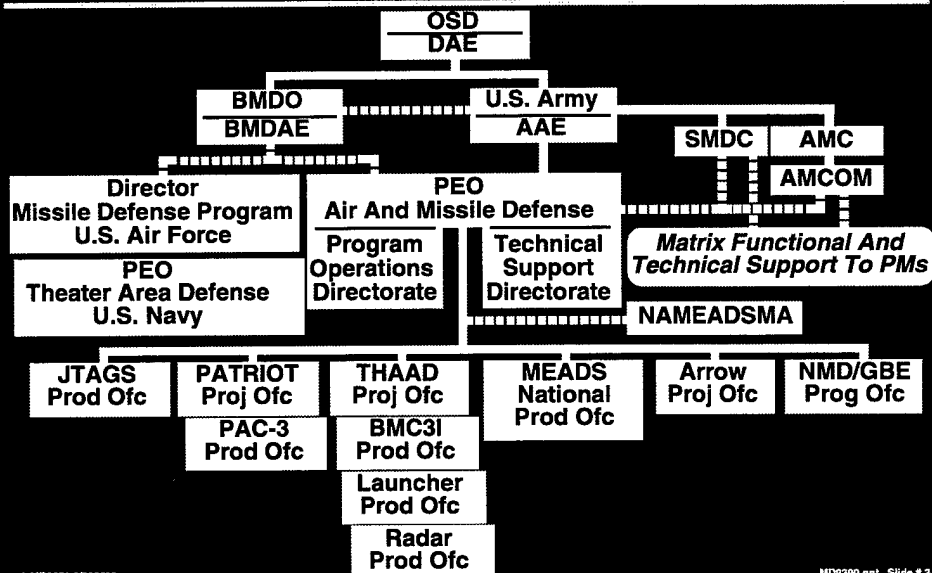
PRESENTED BY
MR. A.Q. OLDACRE
PROGRAM EXECUTIVE OFFICE AIR AND MISSILE DEFENSE

UNCLASSIFIED

UNCLASSIFIED

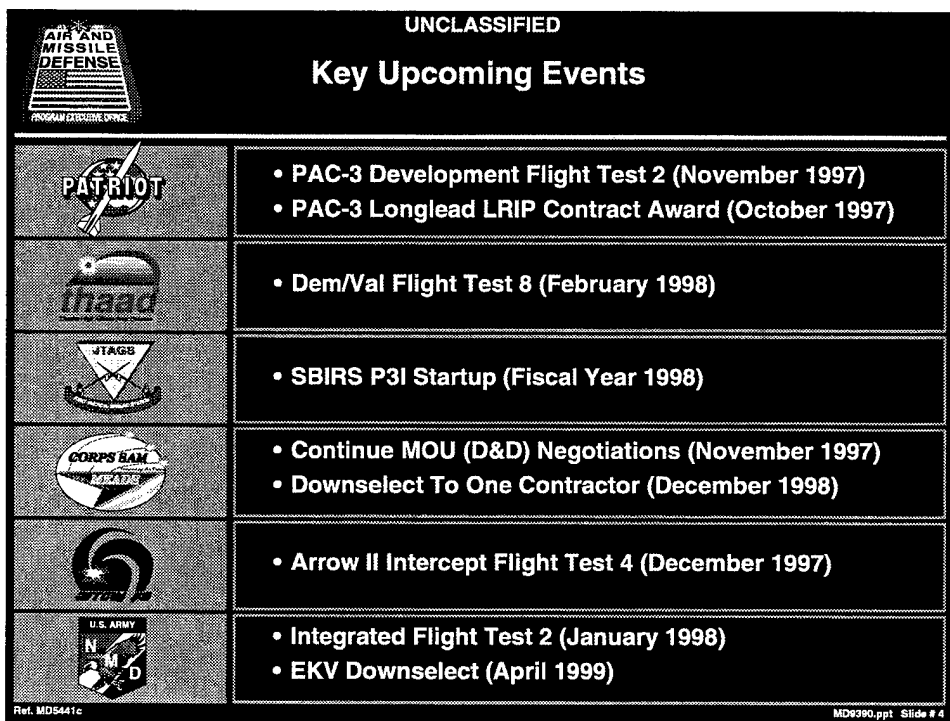
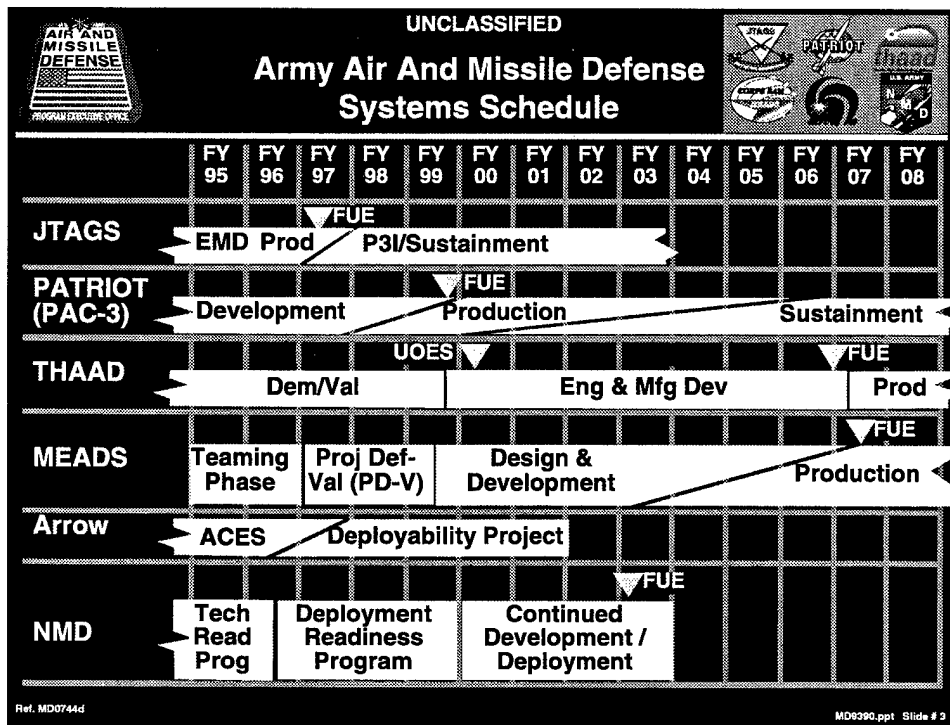


Army Air And Missile Defense Acquisition Management Structure



ref. MD0451-2/D42886

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UNCLASSIFIED

Contracting Opportunity



Contracting Opportunity

**Low Voltage Power Supply (LVPS)
High Density Module**

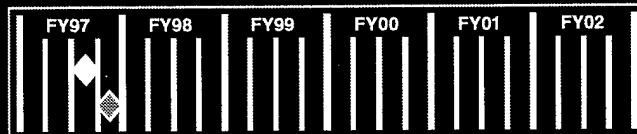
Estimated Value
\$500K-\$1M

Contract Point Of Contact
**Valeta Crandall (205-876-1109)
Vern Chance (205-955-3654)**

Contract Type
FFP

Kind Of Award
Competitive - Full And Open

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◆ Contract Award



MD9390.ppt Slide # 5



UNCLASSIFIED

Contracting Opportunity



Contracting Opportunity

Anti-Cruise Missile (ACM)

Estimated Value
\$8M-\$11M

Contract Point Of Contact
**Valeta Crandall (205-876-1109)
Richard Brown (205-955-3806)**

Contract Type
CPIF

Kind Of Award
Sole Source

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◆ Contract Award



MD9390.ppt Slide # 6



UNCLASSIFIED

Contracting Opportunity



Contracting Opportunity

PAC-3 Missile Low Rate Initial Production (LRIP)

Estimated Value
\$120M-\$130M

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Larry Easterwood (205-955-3577)

Contract Type
FFP

Kind Of Award
Sole Source

Program Description

LRIP Of 52 PAC-3 Missiles, 11 Enhanced Launcher Electronic Systems (ELESs), and 9 Fire Solution Computers (FSCs)

Contractor

Lockheed-Martin Vought Systems

Contractor Point Of Contact

Charlie Simpson (972-603-2807)

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◇ Contract Award



MD9280.ppt Slide # 7



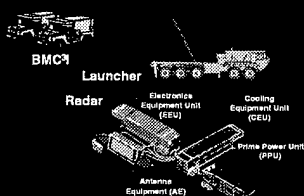
UNCLASSIFIED

Theater High Altitude Area Defense (THAAD) System



Illustration

Missile And Kill Vehicle



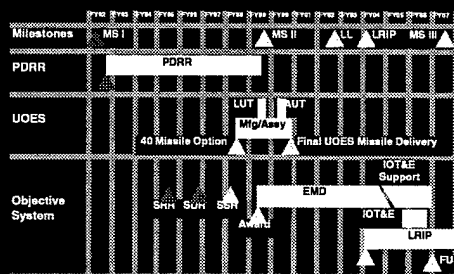
Objective

- Provide Aerial Defense Against Short and Medium Range Ballistic Missiles
- Employ Hit-To-Kill Technology
- Capable Of Both Endo- And Exo-Atmospheric Intercepts
- Constitute Upper Tier Of Two Tiered TBM Defense
- Field Two Battalions

Status

- Currently In PDRR Flight/System Test Phase
 - 7 Flights Conducted
 - System Is Fully Integrated
- UOES Delivered - Less Missiles
- Cause Of Flight Test 7 Failure - Contaminant Introduced By Shorting Plug
- Next Flight Test - February 1998
 - 2+4 Approach
- Milestone II - FY99
- Current Program - FUE FY06
- Focus On Component Reliability And Improved End-To-End Ground Testing Of Missile

Schedule



Ref. MD0004ag

MD9360.ppt Slide # 8



UNCLASSIFIED

Contracting Opportunity



Contracting Opportunity

THAAD User Operational Evaluation System (UOES)

Estimated Funding
\$190M-\$195M

Contract Point Of Contact
W.L. Schick (205-955-3044)

Contract Type
CPFF

Kind Of Award
Exercise Of Existing Contract Option

Program Description

Contract Option To Manufacture, Integrate, Assemble, Ground Test, And Deliver 40 Missiles For The THAAD User Operational Evaluation System (UOES).

Contractor
Lockheed-Martin Missile And Space

Contractor Point Of Contact
Perry Bakke (408-756-7669)

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◆ Contract Award



MD9390.ppt Slide # 9



UNCLASSIFIED

Contracting Opportunity



Contracting Opportunity

THAAD Engineering Manufacturing And Development

Estimated Value
\$340M-\$350M....FY99
\$340M-\$350M....FY00
\$340M-\$350M....FY01

Contract Point Of Contact
W.L. Schick (205-955-3044)

Contract Type
CPAF

Kind Of Award
Sole Source

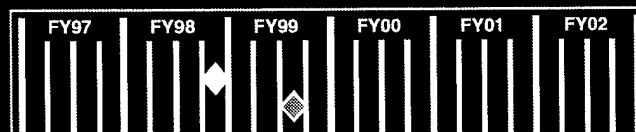
Program Description

The THAAD System Is The U.S. Land-Based Upper Tier TMD System. The High Altitude And Wide Area Protection Furnished By The THAAD System Will Complement The Lower Tier Systems.

Contractor
Lockheed-Martin Missile And Space

Contractor Point Of Contact
Perry Bakke (408-756-7669)

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◆ Contract Award

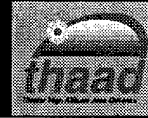


MD9390.ppt Slide # 10



UNCLASSIFIED

Contracting Opportunity



Contracting Opportunity
**Software Independent Verification
And Validation (IV&V)**

Estimated Value
\$90M-\$110M

Contract Point Of Contact
W.L. Schick (205-955-3044)

Contract Type
CPAF

Kind Of Award
Small Business Set Aside

Program Description
**Software IV&V To Support And
Maintain The Transition From
Program Definition And Risk
Reduction (PD&RR) Phase To The
Engineering Manufacturing
Development (EMD) Phase Of
THAAD.**

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◆ Contract Award



MD9390.ppt Slide # 11



UNCLASSIFIED

Contracting Opportunity



Contracting Opportunity
**Simulation/Hardware-In-The-Loop
(HWIL) Development**

Estimated Value
\$40M-\$50M

Contract Point Of Contact
W.L. Schick (205-955-3044)

Contract Type
CPAF

Kind Of Award
Sole Source 8(a) Award

Program Description
**Scientific, Engineering, Analysis,
And Technical Efforts To Design,
Continue To Develop, Fabricate, And
Test Simulations, Drivers, And HWIL
For The THAAD System.**

Contractor
Tech Masters, Inc

Contractor Point Of Contact
Frank Jennings (205-721-6613)

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◆ Contract Award



MD9390.ppt Slide # 12



UNCLASSIFIED

Contracting Opportunity



Contracting Opportunity Design and Development

Estimated Value
In Excess of \$1B

Contract Point Of Contact
U.S. MEADS National Product Office
(205-895-4080)

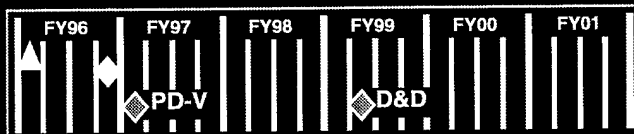
Contract Type
CPIF

Kind Of Award
Limited Competition

Program Description

MEADS Provides Protection Of The Maneuver Forces. MEADS Defends Critical Assets And Forces Of Both The U.S. Army And U.S. Marine Corps By Providing Robust Defense Against Mass Casualty And Mass Destruction Producing Weapons Such As Cruise Missiles And Short Range Ballistic Missiles.

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◇ Contract Award



MD9390.ppt Slide # 13



UNCLASSIFIED

Contracting Opportunity



Contracting Opportunity Modified Arrow Radar Seeker Test Set

Estimated Value
\$400K-\$600K

Contract Point Of Contact
Kim Smith (205-955-4665)

Contract Type
CPFF

Kind Of Award
Sole Source

Program Description

To Provide A Modified Arrow Radar Seeker Test Set For Use In Emulations Of The Seeker For Software And System Tests.

Contractor
Lockheed-Martin

Point Of Contact
Ed Surowiec (407-356-3257)

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◇ Contract Award



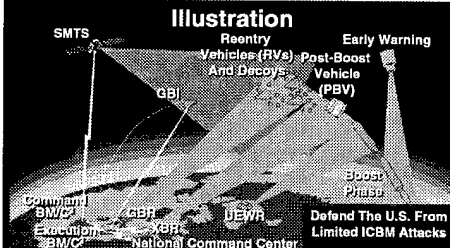
MD9390.ppt Slide # 14



UNCLASSIFIED



NMD/Ground Based Element Program



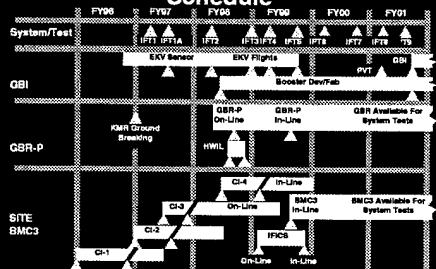
Objective

- Develop And Test Elements Of Initial NMD System Within 3 Years
- Support Capability To Deploy Within 3 Years Of Decision
- Conduct Integrated System Test At USAKA In FY99

Status

- Joint Program Office Established 1 April 1997
- First EKV Sensor Flight Test Successfully Conducted 23 June 1997

Schedule



Ref. MD0008w

MD0230.ppt Slide # 15



UNCLASSIFIED



Contracting Opportunity

Contracting Opportunity
NMD Lead Systems Integration
Execution Phase

Estimated Value
TBD - Based On Industry Approach

Contract Point Of Contact
Mr. Alex Austin At BMDO
(703-604-4288)

Contract Type
CPAF

Kind Of Award
Limited Competition

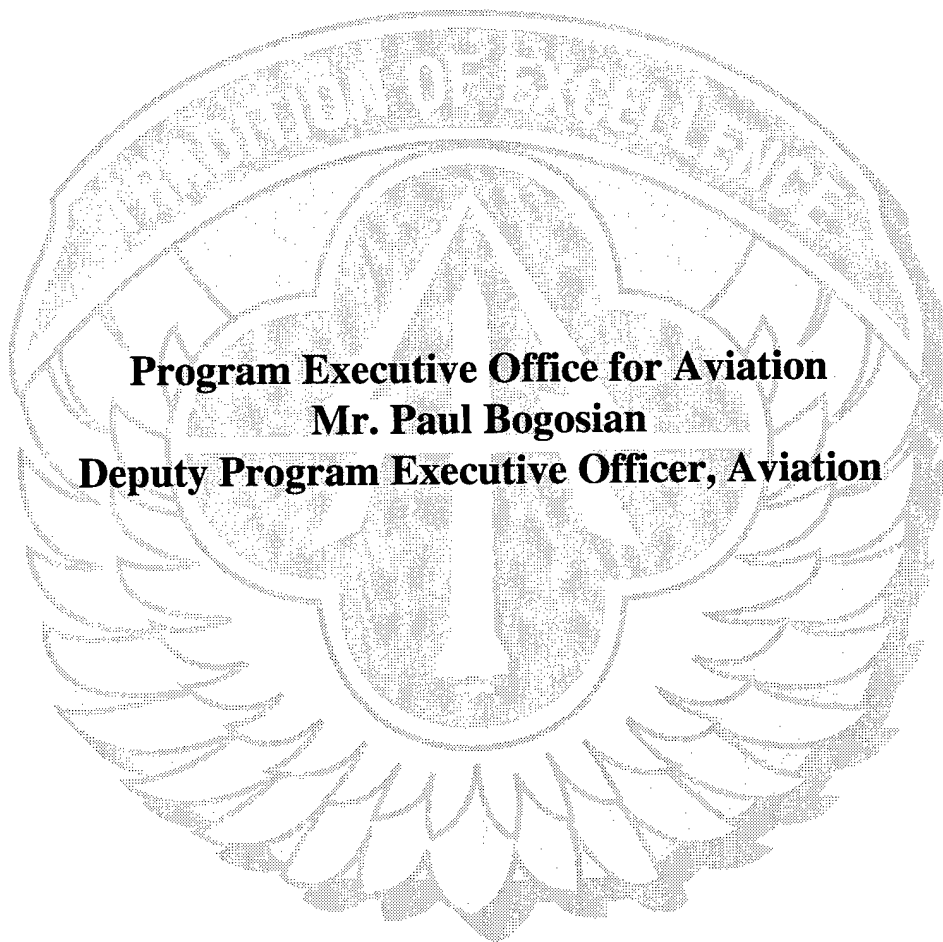
Program Description

Design, Develop, Integrate NMD System. Prepare For FY99 Integrated Test. Prepare To Deploy.

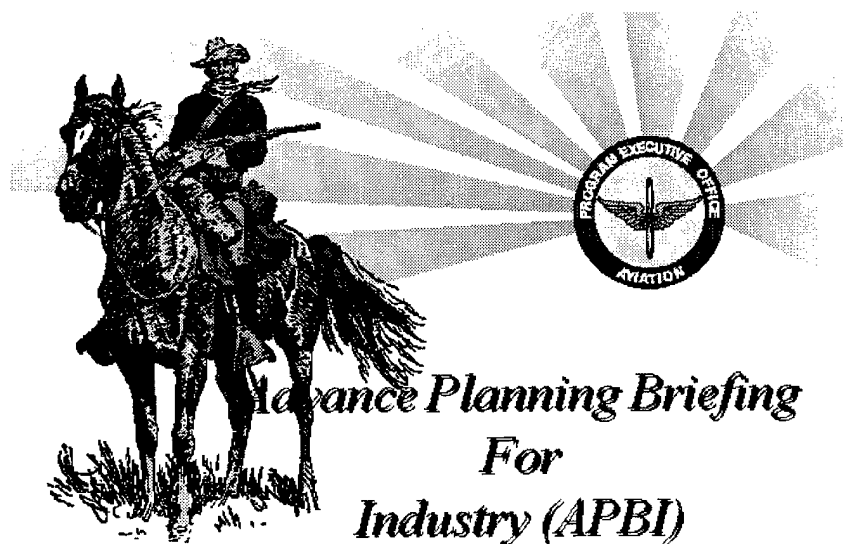
- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◆ Contract Award



MD0230.ppt Slide # 16



Program Executive Office for Aviation
Mr. Paul Bogosian
Deputy Program Executive Officer, Aviation



Mr. Paul Bogosian
Deputy Program Executive, Aviation



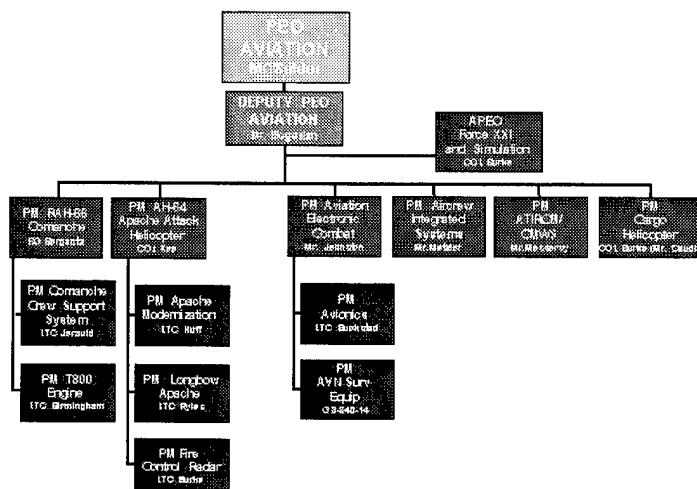
PEO, Aviation Goals

- **Modernize Army Aviation for Least Cost IAW Army Vision 2010**
 - Leverage Acquisition Reform, Science & Technology, Recapitalization, Contractor Logistics Support
- **Ensure Required Aviation Systems Are Ready and Equipped for FY00 Digitized Division**
 - Longbow Apache
 - Kiowa Warrior
 - Army Airborne Command and Control System (A2C2S)





PEO TEAM



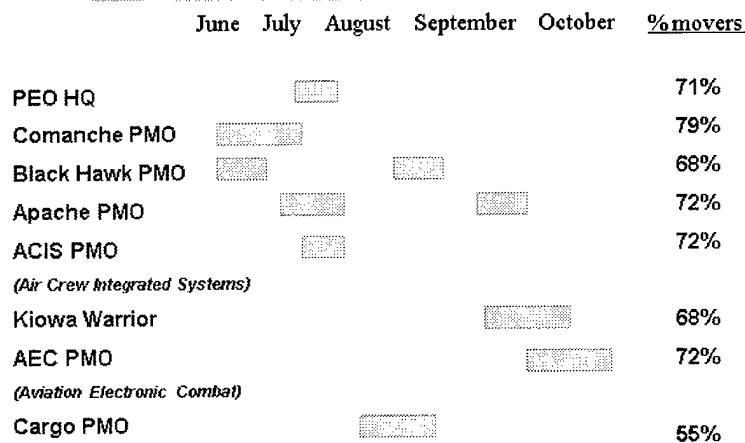
PEO Aviation

Authorized TDA				FY98 Personnel Resources (Work Years)				
	CIV	Mil	TOT	Requirement Type	AMCOM Matrix Support	Contractor Support	Other MSC Support	Totals
PEO	20	3	23	Logistics Support	63	34	110	207
AAH	79	15	94	Programs/Proc Support	35	25	61	121
RAH	80	9	89	Technical Support	105	113	170.6	401
AEC	73	10	83	Totals	203	172	183	729
ACIS	18	2	20					
ICH	16	2	18					
Total	286	41	327					

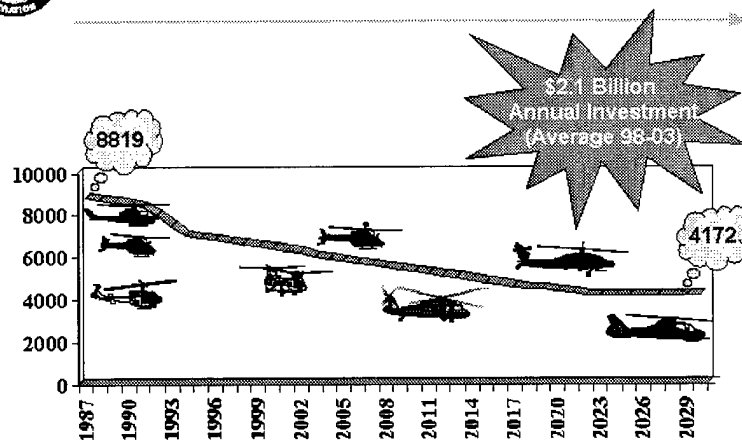




PEO Aviation Move Schedule



Aviation Modernization





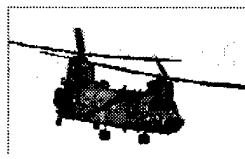
PEO Aviation Budget (\$ in Millions)

BES (15 Sep - Before Congressional Reductions)

RDTE	98	99	00	01	02	03	Total
Comanche	282.0	371.9	441.3	587.0	738.2	778.1	3198.5
Apache	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AEC	69.4	67.2	9.4	7.9	60.5	50.9	265.3
ACIS	7.7	9.0	6.4	9.5	6.5	5.0	44.1
Cargo	22.6	28.8	8.2	1.0	0.0	0.0	60.6
Total	382.0	476.9	488.4	610.5	805.2	834.0	3597.0
APA							
Comanche	0.0	0.0	0.0	0.0	0.0	5.7	5.7
Apache	566.4	723.8	824.5	800.1	810.6	766.1	4491.5
AEC	99.4	132.0	172.8	132.9	249.5	303.5	1090.1
ACIS	12.5	9.3	4.6	1.5	22.4	36.8	87.1
Cargo	63.9	108.6	116.6	278.3	451.2	458.3	1476.9
Total	742.2	973.7	1118.5	1212.8	1533.7	1570.4	7151.3
Total	1124.2	1450.6	1606.9	1823.3	2338.9	2404.4	10748.3



The Modernized Fleet

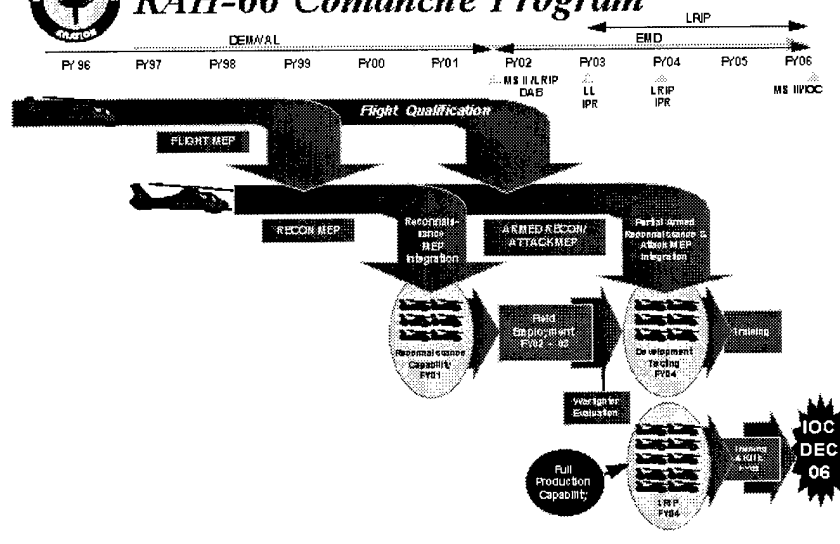


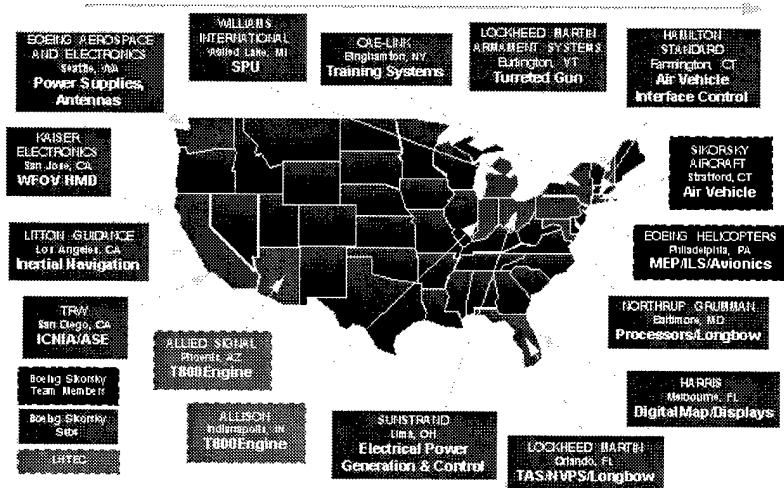
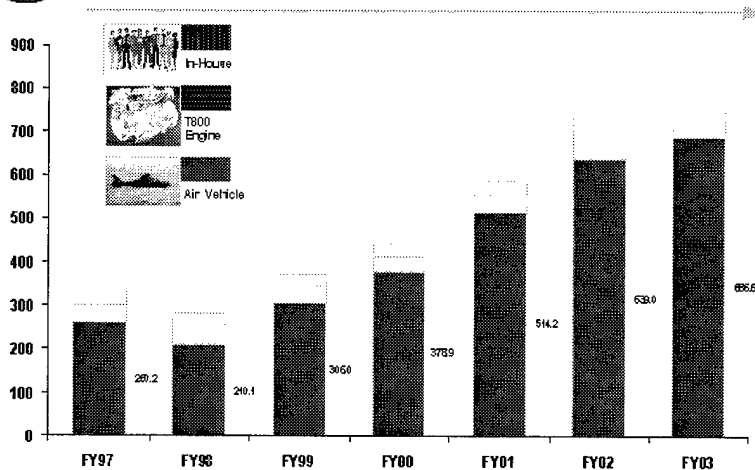


RAH-66 Comanche



RAH-66 Comanche Program



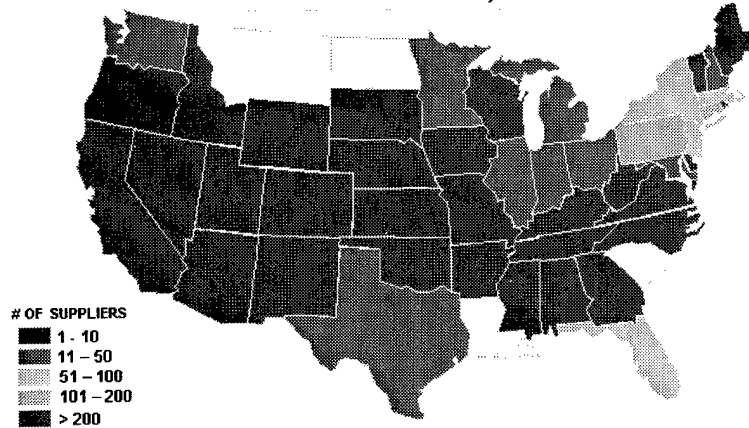




RAH-66 Comanche Dem/Val Program

"Number of 1st & 2nd Tier Suppliers"

Nationwide Total = 1,029

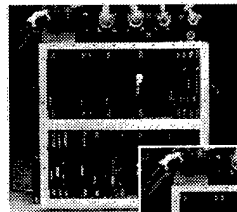
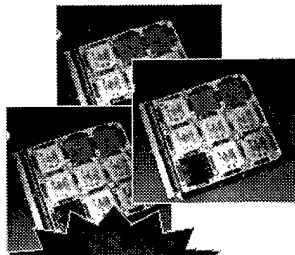


Comanche Processing

Designed For Growth and Technology Upgrades

SEM-E Modules

Two Mission Computers



Solder-Free
Technology

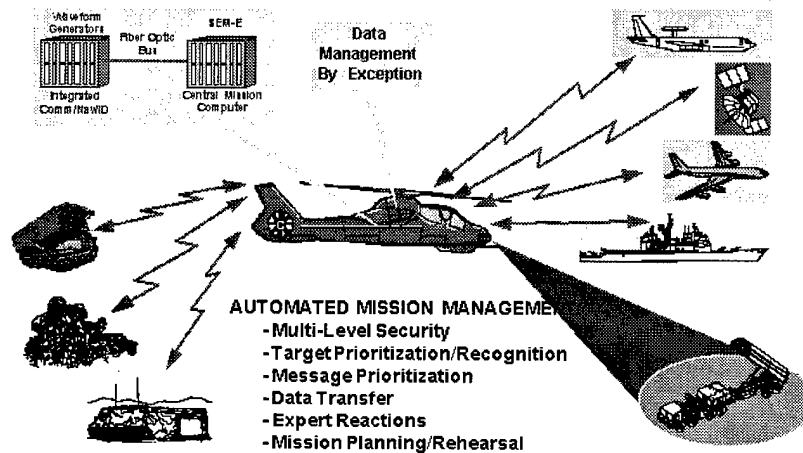
EASY UPGRADE!

- Add Modules
- Replace Modules
- Replace Multi-Chip Packages



2nd Generation Digitization

(Simultaneous/Multi-Channel)



Science and Technology Support

Comanche Technology Challenges Status (3-6-97)

No.	Top 9 Tech Challenges	Assigned Government Organization	Status	Technology Issue
1.	High Temperature Composite Materials	AVRDEC-AATD (Phil LeFerriere) 737-878-3977	R Y	Current Shafts within Firewall are Subject to Failure Due to Heat or Fire. Need Low Cost/Lightweight High Temperature (>1100 Deg.F) Drive Shaft.
2.	LO Canopy Transparency	AVRDEC-AATD (Mac Dinning) 737-878-2361	Y	Multiple Scatter Between Rotor and Canopy Dominates Dynamic Signature at Some Viewing Aspects
3.	Lightweight, Ballistic Armor	AVRDEC - AATD (Kent Smith) 737-878-3673	Y	Existing Armor Technology Will Not Provide Ballistic Protection At Desired Low Aerial Density
4.	Helmet Mounted Flat Panel Display	NYSED (Howard Kessler) 703-704-1362	Y	Need For High-Light-Throughput Operation Integrated Heater Element, and Full MIL Ruggedization
5.	Paint (IR, Visual, etc.)	AVRDEC - AATD (Mac Dinning) 737-878-2361	Y	Current Baseline MIL-SPEC 46186 Aircraft Green Paint Does Not Meet Comanche Established Requirement
6.	LO Dielectric/High Strength Materials	AVRDEC - AATD (Mac Dinning) 737-878-2361	W	Material Design Required to Overcome High Frequency Skin Limitations and Improve RCS Performance Over Baseline Skin



Science and Technology Support (Cont'd)

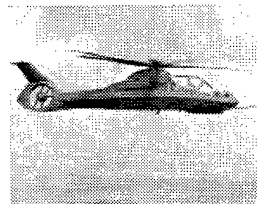
Comanche Technology Challenges Status (3-6-97)

No.	Top 9 Tech Challenges	Assigned Government Organization	Status	Technology Issue
7.	Aluminum Beryllium/Rhodium Aluminum	AVRDEC-AATD (Michael Galvas) 757-878-5732	E	Corrosion Protection Coating Technology and Methods For Application of Coatings
8.	Regime Recognition, Safe Life and Damage Tolerance (Usage Monitoring)	AVRDEC (Jack Tanney) 757-878-5602	E	Regime Recognition Integration and Risk Reduction/Regime Recognition Application to Usage Monitoring
9.	ECS/Regenerative Filters	AVRDEC - AATD (Kevin Nolan) 757-878-5875	W	Current Pressure Swing Absorber (PSA) Filter Failed to Meet Established Performance Requirement



Contracting Opportunities (Comanche Development)

- Description: Aircraft development contract for the RAH-66 Comanche.
- Sole Source-Boeing/Sikorsky
- Value: \$1.7B
- POC: Carolyn Orf (205) 842-7743





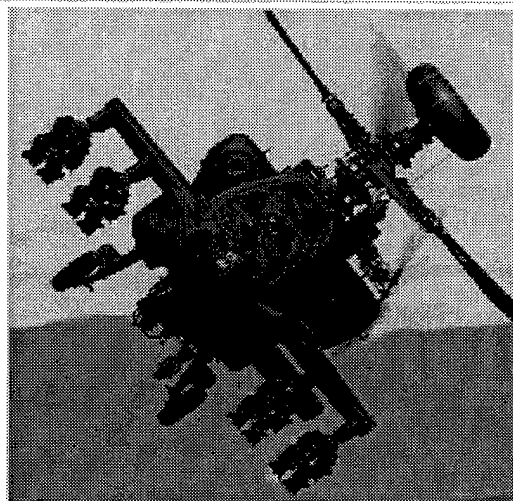
Contracting Opportunities

(T-800 Engine)

- Description: Engine development contract for the RAH-66 Comanche.
- Sole Source-LHTEC
- Value: \$227M
- POC: Carolyn Orf (205) 842-7743

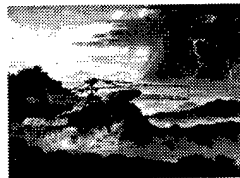


AH-64D Longbow Apache

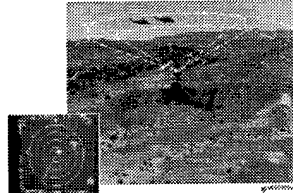




Longbow Capability



Terrain Profile



Air Targeting

Longbow Apache Provides:

- Automatic target detection, classification, and prioritization
- Adverse weather precision strike capability
- Multi target engagement capability
- Fire and forget capability
- Destruction of Enemy Air Defense

Ground Targeting



AH-64A Apache Modernization

High Frequency
Radio

SINCGARS

Automated
Mission Planning
System

EGI
Embedded Global
Inertial

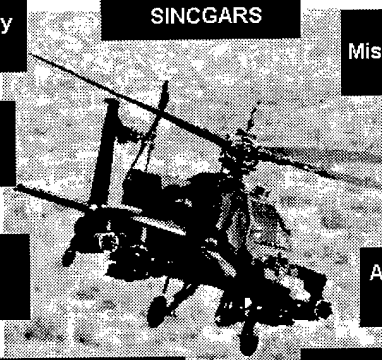
Alternate
Laser
Code

TADS/PNVS
Reliability

Area Weapon System
Reliability

Fire Control Computer
Improvements

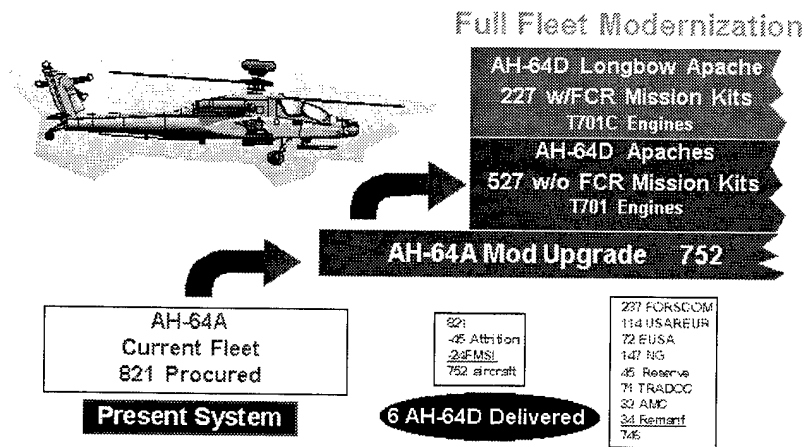
AVR2
Laser Detecting Set



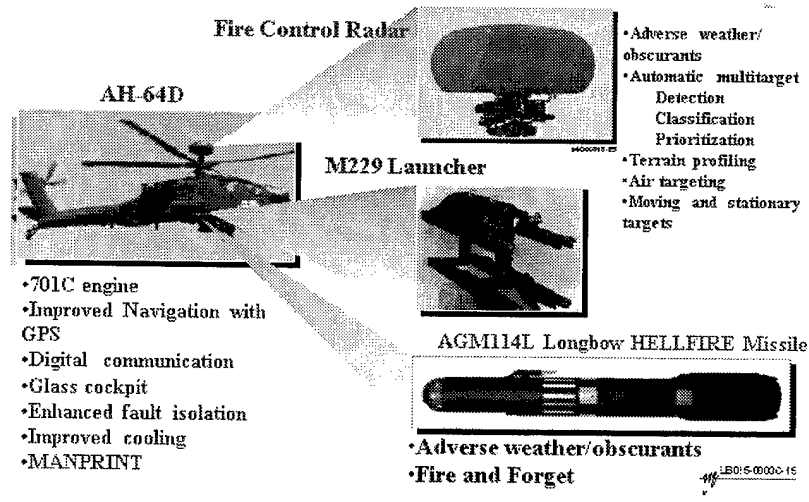
PS0401



US Army Apache Modernization



Longbow: The System





Apache Challenges

- **Top five technical:**
 - **Improved Sensors**
 - **Digitization**
 - **Software Acquisition/Support Under Commercial Practices**
 - **Propulsion / Drive Train Upgrades**
 - **Airframe Life Extension**
-

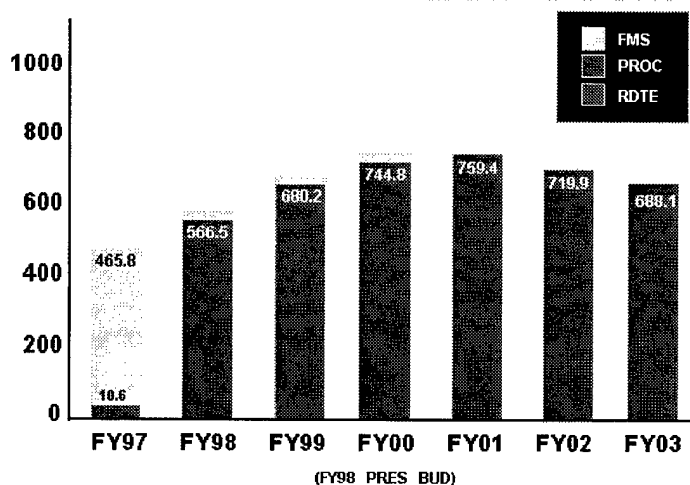
P70001



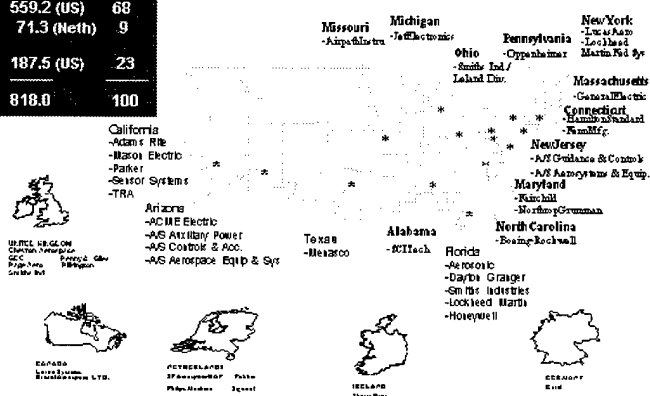
Apache Challenges

- **Top five technical:**
 - **Improved Sensors**
 - **Digitization**
 - **Software Acquisition/Support Under Commercial Practices**
 - **Propulsion / Drive Train Upgrades**
 - **Airframe Life Extension**
-

P70001



Prime	System	FY 97/98 Workshare \$(M)	%
Boeing	Apache	559.2 (US) 71.3 (Neth)	68 9
LB Ltd	FCR/RFI	187.5 (US)	23
	Total	818.0	100





Contracting Opportunities

(AH-64D Longbow Production)

- Description: Multi-year contracts for production of the AH-64D Longbow.
- Sole Source-Boeing/Multiyear
- Value: \$4.9B
- POC: Joanne Kennedy (205) 313-4029



Contracting Opportunities

(AH-64D Fire Control Radar)

- Description: Multi-year contract for production of the AH-64D Longbow Fire Control Radar.
 - Requires Congressional Approval
 - Award Date: Dec 97
- Sole Source-Lockheed/Martin
- Value: \$533M
- POC: Joanne Kennedy (205) 313-4029



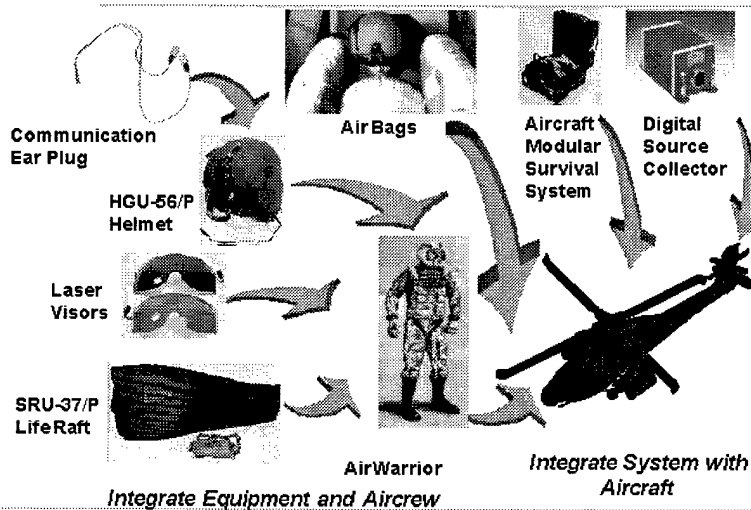
Contracting Opportunities

(AH-64D Radar Frequency Interferometer)

- Description: Multi-year contract for production of the AH-64D Longbow Radar Frequency Interferometer.
 - Potential contract in negotiations
 - Award Date: Dec 97
- Sole Source-Lockheed/Martin
- Value: \$92M
- POC: Joanne Kennedy (205) 313-4029



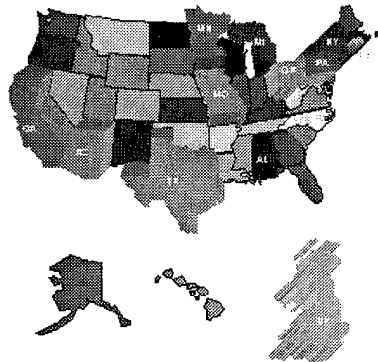
Aircrew Integrated Systems Projects



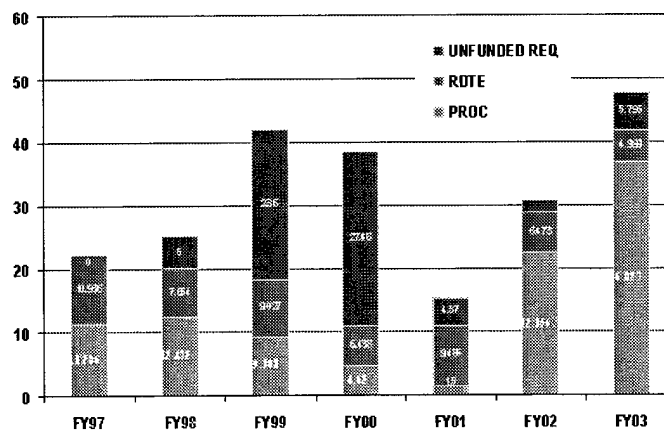


ACIS PMO Vendor Base

PRIME	SYSTEM	FY97/98	
		WORK SHARE \$(M)	%
Gentex	AHS	5.994	12
Simula	CABS	27.138	55
Motorola	Air Warrior	6.868	14
AOtec	JALEPV	4.215	8
Production Products	CEP	0.100	<1
Smiths Industries	DSC	0.100	<1
Programmatic and Technical Support	All	4.337	9
	TOTAL	48.752	100



ACIS PMO Funding



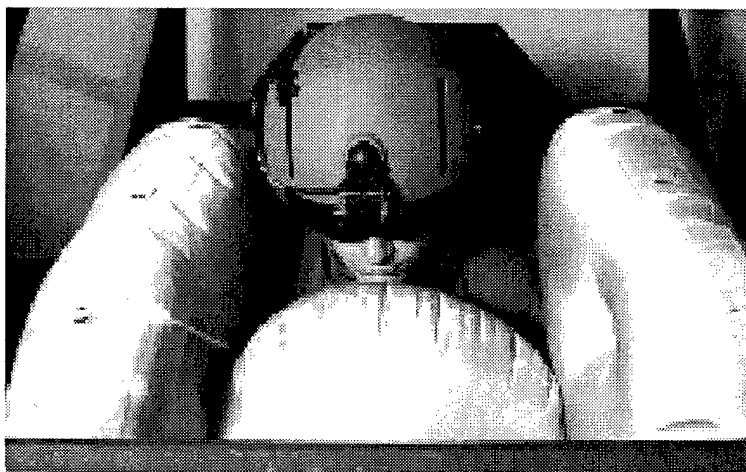


Future Technology Needs

- **Light Weight Helmet Mounted Display Components**
 - **Air Bag Gas Generators**
 - **Weight and Bulk Reduction**
 - **Heat Stress (Eliminate) for Air Warrior Components**
 - **Significant O & S Savings from Digital Source Collector**
-



Cockpit Airbag System





Contracting Opportunities

(Digital Source Collector (DSC) Production)

- Description: The Digital Source Collector is a multifunction data recorder which will simultaneously acquire and process flight performance, aircraft structural, engine, and drive train electronic data, and voice interchanges during flight.
- Award Date: October 98
- Competitive-COTS
- Value: \$72M
- POC: Bob Sheibley (205) 313-4265



Contracting Opportunities

(Air Warrior (AW) Phase II Development)

- Description: AW is the rotary wing aviation focus for providing a mission tailorable system that standardizes and integrates Aviation Life Support Equipment (ALSE) for aircrews during flight and ground operations. Some portions of the system will interface with aircraft-mounted equipment and will require integration through a common interface and designed-in compatibility.
- Award Date: October 98
- Competitive
- Value: \$92M
- POC: Paul Bippen (205) 313-4263



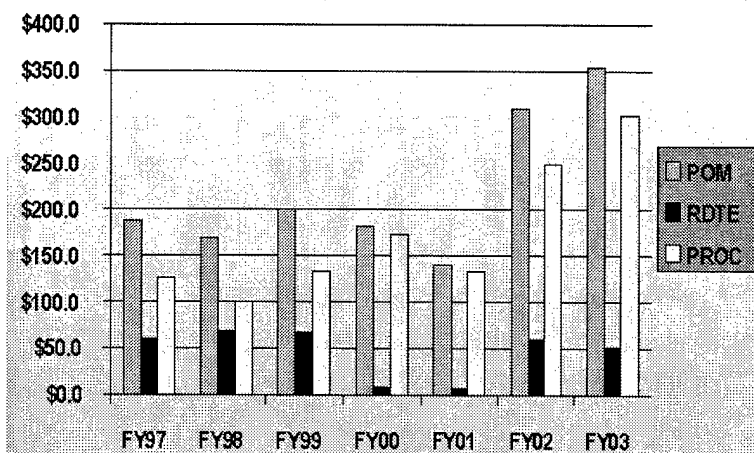
Contracting Opportunities

(Air Warrior (AW) Phase II Development)

- Description: AW is the rotary wing aviation focus for providing a mission tailorable system that standardizes and integrates Aviation Life Support Equipment (ALSE) for aircrews during flight and ground operations. Some portions of the system will interface with aircraft-mounted equipment and will require integration through a common interface and designed-in compatibility.
- Award Date: October 98
- Competitive
- Value: \$92M
- POC: Paul Bippen (205) 313-4263



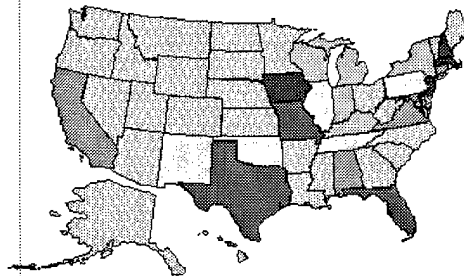
PM AEC POM Funding Line (\$M)





AEC Contractor Location By State

CONTRACTOR	PROGRAM	FY87/FY88	ST	%
ASSURANCE TECH CORP	ARC-220, TR-100, OPS, ARESA	\$ 22,811	BA	7.2%
ASTRONAUTICS	OPS	\$ 5,497	WI	1.2%
BOEING (BHS)	ATL, ARESA, ARESA-C22, TR	\$ 15,265	MO	5.1%
CAS	ARC-C22, ARESA	\$ 37,085	AL	6.0%
DYNACORP	ARC-C22, ARESA-C22, OPS, ARESA	\$ 10,782	TX	4.7%
GEOBARCOH	OPS	\$ 19,135	HJ	4.7%
HONEYWELL	OPS	\$ 5,830	FL	1.3%
HUGHES, DAREURY	ARC-C22	\$ 7,935	CT	2.7%
ITT	ATL, ARESA-C22	\$ 25,888	HJ	10.1%
LOCKHEED BAMPERS	ATL, ARESA	\$ 6,271	HI	12.2%
ROCKWELL INTL	TR, ARESA-C22, ARESA-C22, ARESA	\$ 44,440	LA	15.2%
SAC	ARC-C22, TR-100, ARESA, ARESA	\$ 12,860	CA	4.4%
SIRONY	ARC-220	\$ 5,005	CT	2.7%
SYNTECH	TR	\$ 5,110	FL	2.2%
UNO AVIATION	ARC-220, ARESA-C22, TR-100, TR	\$ 10,085	MO	5.1%



ONLY CONTRACT TOTALS GREATER THAN \$5M SHOWN



AEC Contractor Locations

(Totals Less Than \$5.0M)

CONTRACTOR	PROGRAM	FY87/FY88	ST	%	CONTRACTOR	PROGRAM	FY87/FY88	ST	%
ALL INDUSTRIES	ARC-144	\$ 70	PA	0.0%	LEONARD - RAYMOND EBY	ARC-220	\$ 1,424	NY	0.7%
ALLIED SIGNAL	ARC-220, TR-100	\$ 5,159	MO	0.4%	UTTON	AMP	\$ 434	CA	0.1%
ARCO	ARC-220	\$ 110	MO	0.1%	LOCAL ECONOMY (ST LOUIS)	TR-100	\$ 201	MO	0.0%
BELL HELICOPTERS TEXTRON	ARC-220	\$ 4,000	TX	0.3%	LOCKHEED MARTIN FED	ARC-C22, TR	\$ 2,270	TX	0.4%
BOEING BIRMINGHAM SUP	ARC-220	\$ 100	TX	0.0%	LOCKHEED MARTIN LOG	ARC-C22, TR	\$ 1,119	TX	0.2%
CUMMINS	ARC-220, TR-100	\$ 402	AL	0.1%	MARTECH	ARC-220	\$ 630	HJ	0.1%
COBRA	OPS	\$ 1	MO	0.0%	MARCONI	ARC-220	\$ 700	VA	0.1%
COLEMAN RESEARCH CORP	TR-100	\$ 124	FL	0.0%	NATIONLINE	ARC-220, OPS, TR	\$ 1,410	HJ	0.2%
COMPUTER SCIENCE CORP	ARC-220, ARESA	\$ 5,447	VA	0.7%	SEA	AMP	\$ 1,460	AL	0.0%
DATACOR	TR-100	\$ 130	MO	0.0%	SEI RIND	AMP, OPS	\$ 2,027	MO	0.4%
ENGINEERING & PROFESSIONAL SVCS	ARC-220	\$ 110	TX	0.0%	STI	ARC-220, TR-100	\$ 4,400	FL	0.4%
ENTERTEC	ARC-220	\$ 110	TX	0.0%	TRONOL	ARC-220	\$ 2,700	AL	0.4%
HUGHES SPENCE CORP	ARC-220	\$ 400	TX	0.1%	UNO LEAK SERVICES, INC	ARC-144, ARC-220	\$ 34	OK	0.0%
INTERARCH PARTNERS	ARC-220	\$ 240	TX	0.0%	VITRONICS	TR-100, ARC-220, TR	\$ 1,300	TX	0.2%
INFORMAL CONCEPTS INC	TR	\$ 5,111	VA	0.7%	WESTAR	TR-100, ARC-220, TR	\$ 1,300	TX	0.2%
ISMOON	ARC-220	\$ 400	MO	0.1%					



Science and Technology Support

No.	Technology Challenge	Assigned Gov't Organization	Status	Technology Issues
1.	Broad-Band Laser Sources For Infrared Missile Jamming	NVESD (Dr. Joe O'Connell) 908-427-4870	Y	Current Lasers Operate Naturally at Only a Few Specific Wavelengths in the Infrared
2.	Integrated Obstacle Avoidance System	NVESD (Dr. Joe O'Connell) 908-427-4870	Y	In Order to Detect and Avoid Wires at NOE, a High Repetition Rate Laser Radar Technology is Required
3.	Micro-Electronic Miniaturization	CECOM RDEC	Y	Electronics That Can Withstand Extreme Military Environments
4.	Increasing Antenna Effectiveness	CECOM RDEC (John Prorok) 732-427-3548	Y	The Close Proximity of Many Antennas on Platforms Results in "Co-Site" Interference Problems

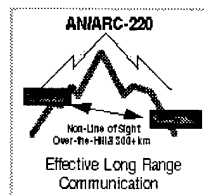


Contracting Opportunities

(AN/ARC-220)

- Description: Hardware procurement of the AN/ARC-220, VRC-100, and maintenance trainers. The AN/ARC-220 is an HF radio that will provide secure and non-secure voice and data communications.
- Award Date: 2nd Quarter, Fiscal Year 98

- Sole Source-Rockwell Collins
- Value: \$21.9M
- POC: MAJ Crabb (205) 313-6608





Contracting Opportunities

(AN/ARC-220)

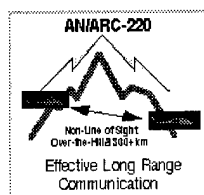
- Description: Aircraft integration kits for UH60, AH64A/D and OH58D.

- Award Date: 3rd Quarter, Fiscal Year 98

- Sole Source (aircraft manufacturer)

- Value: \$17.3

- POC: MAJ Crabb (205) 313-6608



Contracting Opportunities

(Advanced Threat Infrared Countermeasures (ATIRCM))

- Description: EMD and programmatic support for ATIRCM. ATIRCM is an airborne system which provides infrared homing protection to the aircraft by detecting and defeating approaching anti-aircraft missiles.

- Sole Source-Lockheed Martin/Sanders

- Value: \$21.8M

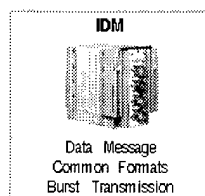
- POC: Dr. Messervy (205)313-1049



Contracting Opportunities

(Improved Data Modem (IDM))

- Description: Hardware procurement of the IDM. The IDM is a multi-service, interference-resistant modem.
 - Award Date: October 98
- Competitive
- Value: \$18-25M
- POC: Mr. Tim Floate (205) 313-0638

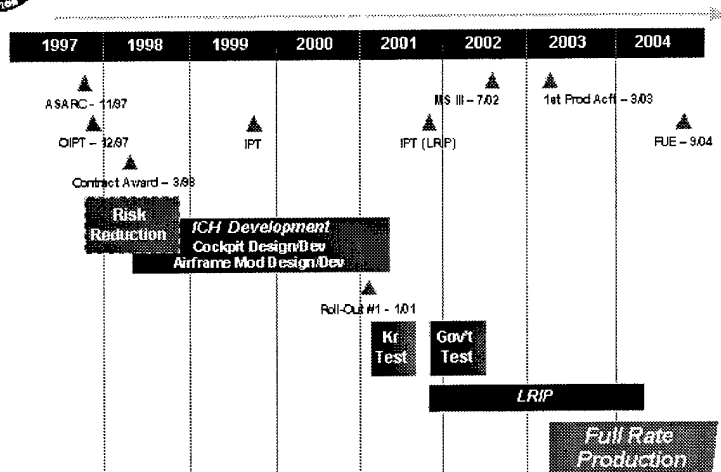


Improved Cargo Helicopter (ICH)





ICH Program Schedule



Current ICH Program Funding

	MS II					MS III		1st Delivery		
	▼					▼		▼		
FY	97	98	99	00	01	02	03	To Complete	Total	
RDT&E	17.1	22.6	28.8	8.2	1.0			0.0	77.7	
Procure				29.2	77.1	229.7	235.7	2,837.1	3408.8	
Sub Total	17.1	22.6	28.8	37.4	78.1	229.7	235.7	2,837.1	3486.5	
Quantity						12	18	270	300	



Service Life Extension Program

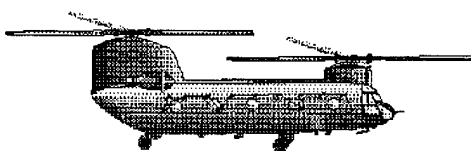
SLEP/ICH

DEFICIENCIES

- Rising O&S Costs and Readiness at Risk
- Avionics/Electronics
- Lift Performance

SOLUTION

- Vibration Reduction and Overhaul/Remanufacture
- Modernize to Digitization Capability
- Engine Conversion From 712 to 714 with FADEC



Contracting Opportunities

(Cargo Helicopter Force XXI Cockpit)

- Description: Design and implement a modernized cockpit compatible with the future "digitized battlefield." The cockpit will feature long-range precision navigation and communication, open system architecture, and compatibility with Aviation Mission Planning System.
- Sole Source: Boeing
- Value: \$300M
- POC: Cliff Karvinen (205)-313-4308



Contracting Opportunities

(Cargo Helicopter Training & Simulation Devices)

- Description: Update existing trainers and provide new cockpit and maintenance trainers for the Cargo Helicopter.
 - Competitive
 - Value: \$100M
 - POC: Cliff Karvinen (205) 313-4308
-



Missile RD&E Center Vision and Strategic Plan
Dr. William C. McCorkle
Technical Director for Missiles, USAAMCOM and
Executive Director Missile RD&E Center



1997 Advance Planning Briefing for Industry

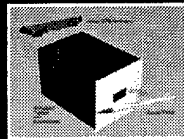
Simulation

Customer
Support

MRDEC HWIL Simulations...



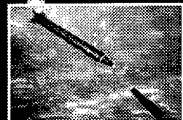
Missile HWIL



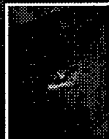
Countermeasures



CFD



Intercept Visualization



Missile HWIL

MRDEC DIS Simulation...



Operations



TOW DIS



Helicopter



FFGM



Avenger



Linebacker

APEX

Open for and to business....

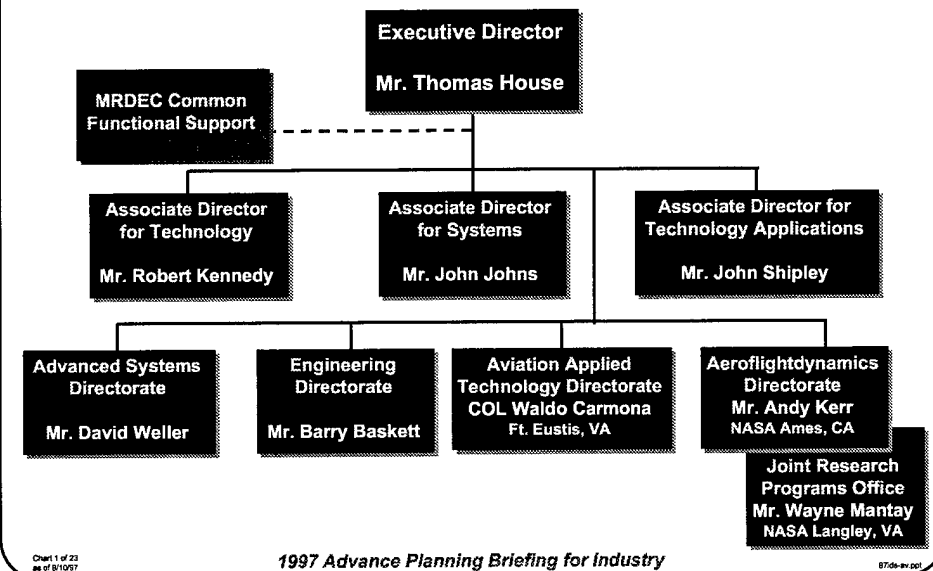
TINTO-APBI/McCorkle-8/97



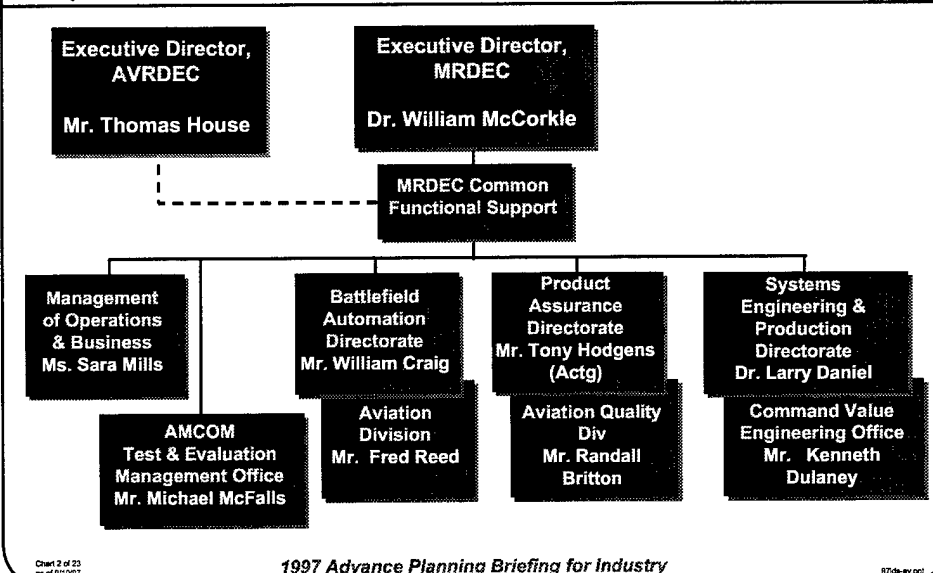
Aviation RD&E Center Vision and Strategic Plan
Mr. Tom L. House
Technical Director for Aviation, USAAMCOM and
Executive Director Aviation RD&E Center



Aviation Research, Development and Engineering Center




MRDEC Common Functional Support to the AVRDEC






Missile RD&E Center Opportunities
Dr. Paul L. Jacobs
Associate Director for Technology, Missile RD&E Center



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Advanced Concepts

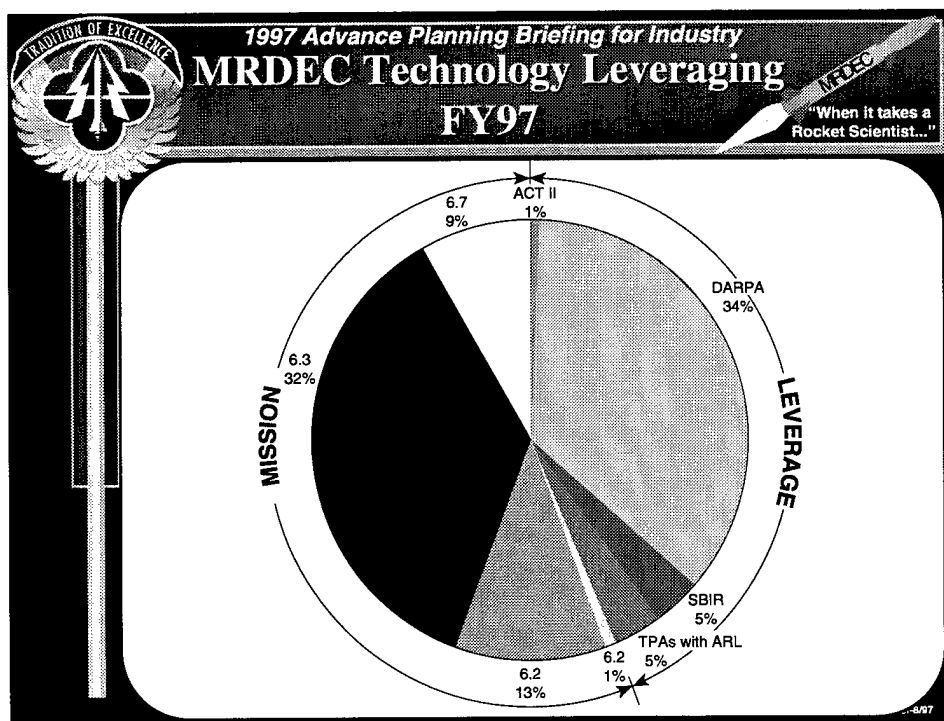
POC List



Concept	POC	Branch	Phone
UGV/S - RWC - SCORPION - Fire & Forget - Program 559	Ms. Suzy Young	Concepts	(205) 876-5663
RADS	Mr. Robbie Roberson	Deep Battle	(205) 876-3660
SCORPION (M270 Replacement)	Mr. Robbie Roberson	Deep Battle	(205) 876-3660
Adaptive Missile	Mr. Robbie Roberson	Deep Battle	(205) 876-3660
2.75" Guided Rocket / Missile	Mr. Forrest Ruble	Deep Battle	(205) 842-8765
LDADS	Mr. Monte Hollowell	Deep Battle	(205) 876-9056
CLAWS	Mr. Mike Wicks	Deep Battle	(205) 876-7459
LOSAT P3I	Mr. Charles Jones	Close Battle	(205) 876-1248
BLASTER	Mr. John Fulda	Close Battle	(205) 876-8478
Powered Submunition	Mr. Jim Dinges	Deep Battle	(205) 876-9276
HI-QUAMS	Mr. Jim Dinges	Deep Battle	(205) 876-9276
Virtual Reality	Mr. Jerry Evans	Plans	(205) 876-2357

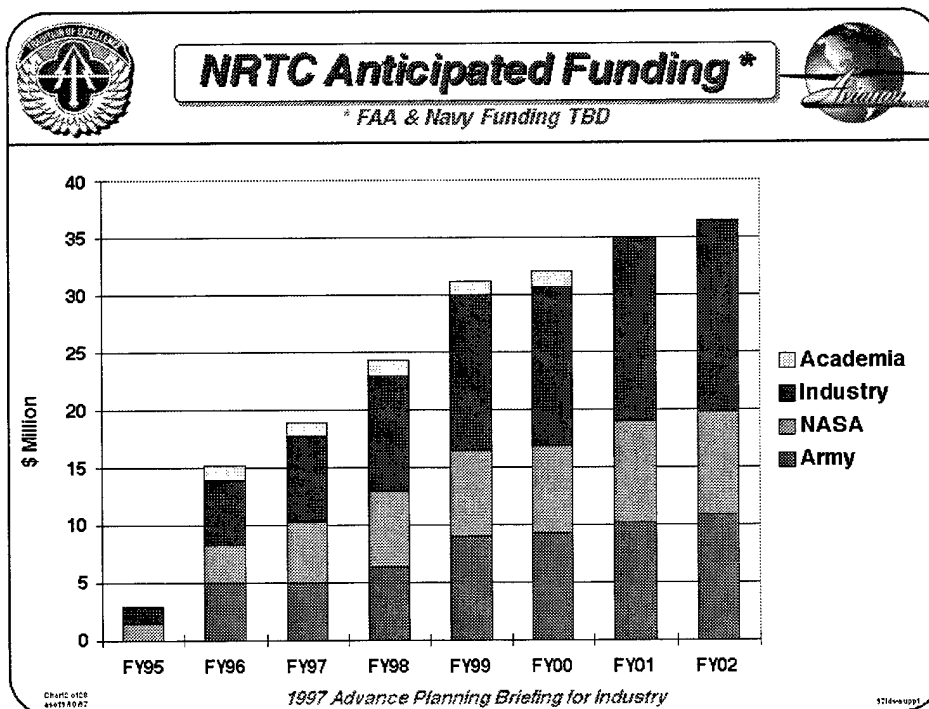
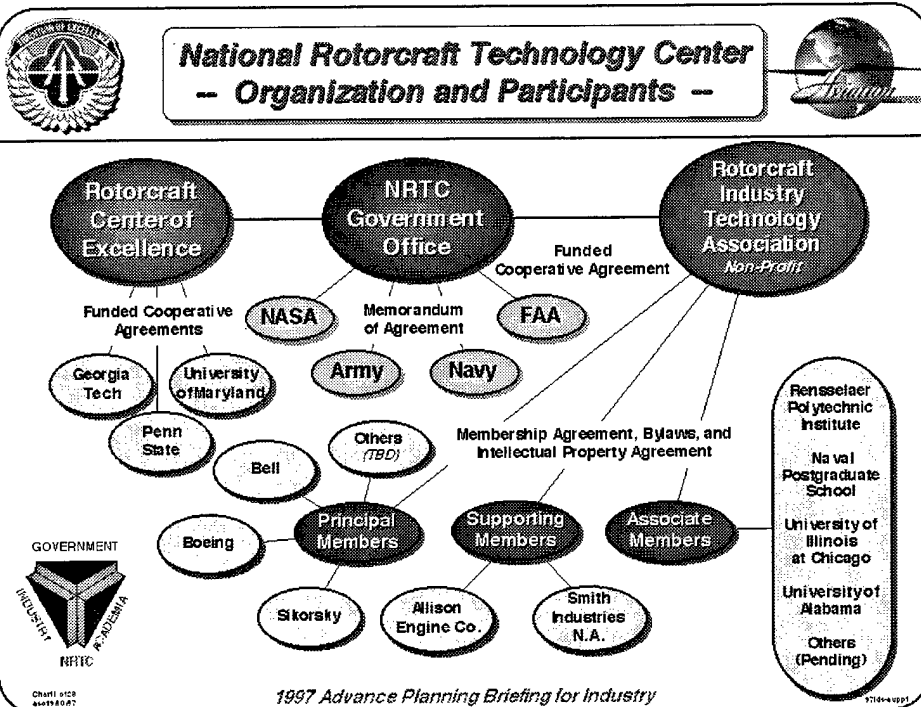
Details Available in Blue Book

MRDEC APBI-8/97





Aviation RD&E Center Contract Opportunities
Mr. Robert V. Kennedy
Associate Director for Technology, Aviation RD&E Center





Small Business Innovative Research (SBIR) Program Objectives



- **Stimulate Technological Innovation**
- **Increase Small Business Participation in Federal R&D**
- **Increase Private Sector Commercialization of Technology Developed through Federal R&D; Document Return on Investment**
- **Foster and Encourage Participation by Woman-owned and Socially and Economically Disadvantaged Small Businesses**

GRAPHICS
810194007

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FY97 SBIR



- **FY97 DA Extramural R&D Program** **\$ 3.76 Billion**
- **SBIR Tax (2.5%)** **\$ 93.3 Million**
- **AVRDEC SBIR Program** **\$ 9.0 Million**
- **Number of DA Phase I** **289**
- **AVRDEC PHASE I** **13**
- **Number of DA Phase II** **93**
- **AVRDEC PHASE II** **9**

GRAPHICS
810194007

1997 Advance Planning Briefing for Industry





Milestones for DA SBIR Program



- | | |
|------------------------------------|--------------|
| • Solicitation Opens | May |
| • Solicitation Closes | July |
| • Evaluation of Phase I Proposals | July-October |
| • Phase I Contract Awards | November |
| • Phase II Letters of Invitation | May |
| • Phase II Proposals Due | June |
| • Evaluation of Phase II Proposals | June-July |
| • Phase II Contract Awards | December |

CHART 91C
64578-01-07

1997 Advance Planning Briefing for Industry

9716v4091



SBIR Provides Opportunities For Large Companies Too!



- Opportunities exist for Large Companies, as well as Small Companies, through Teaming, to harness innovative talent.
- Large Companies can be a Subcontractor on Phase II SBIR programs.
- "Mentoring" relationship of Large Company to Small Company under "Fast Track" matching funds.
- Small Companies retain the patent right to any invention.

CHART 91C
64578-01-07

1997 Advance Planning Briefing for Industry

9716v4091



AVRDEC S&T Programs & Other Acronyms



3rdGARD	Third Generation Advanced Rotor Design
ACTD	Advanced Concept Technology Demonstration
ALERT	Air/Land Enhanced Reconnaissance and Targeting
AMUST	Airborne Manned/Unmanned Systems Technology
ARCAT	Advanced Rotorcraft Aeromechanics Technology
ART	Advanced Rotorcraft Transmission
ATD	Advanced Technology Demonstration
AWE	Advanced Warfighting Experiment
BHAW	Brilliant Helicopter Advanced Weapons
FMTI	Future Missile Technology Integration
HACT	Helicopter Active Control Technology
HQ	Handling Qualities; Headquarters
ICT	Integrated Concepts Team
IPT	Integrated Product Team
JTAGG	Joint Turbine Advanced Gas Generator
JTR	Joint Transport Rotorcraft
LCPK	Low Cost Precision Kill (2.75" Guided Rocket)
RACE	Rotorcraft Air Combat Enhancement
RAST	Rotorcraft Attack System Technology
RPA	Rotorcraft Pilot's Associate
RWSTD	Rotary Wing Systems Technologies Demonstration
SLAIR	Survivability/Lethality Armament Integration in Rotorcraft
STAS	Subsystem Technology for Affordability & Supportability
STIRR	Subsystem Technology for InfraRed Reduction

CRJMT-AICA
6/97/AVRDEC

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9714-4-1001

WORK UNIT TITLE: Rotary Wing Technology Demonstration
PERFORMING ORGANIZATION: AATD-AMCOM
POC/PHONE: Mr. Jon Schuck, (757) 878-4304/DSN 927-4304

OBJECTIVES:

- o Demonstrate Rapid, Low Risk Development of Affordable, Efficient Rotorcraft Airframes Incorporating Quality Structural Concepts That Fully Exploit Advanced Composite Materials' Strength and Cost Capabilities.

TECHNICAL CHALLENGES:

- o Accurate, Rapid Analysis, Modeling & Simulation.
- o Multi-Disciplinary Design Optimization for Efficiency.
- o Confidence in Extensive Bonding/Curing Assys.
- o Accurate, Affordable Sensors and Cure Algorithms.
- o Lean, Highly Capable Processes.

APPROACH:

- o Select Major Airframe Subassembly With Chronic Documented Performance and Affordability Issues.
- o Demonstrate Accelerated Development Using Highly Integrated Concepts Analysis Tools.
- o Rapid Selection of Innovative, Efficient, Affordable Structural Concepts.
- o Develop Virtual Structural & Manufacturing Prototype.
- o Conduct Extensive Coupon/Elemental Level Tests to Validate Virtual Prototype and Mitigate Risk.
- o Fabricate Full-Scale Assemblies to Validate Virtual Prototype Design.
- o Demonstrate Attainment of Exit Criteria via Testing.

SCHEDULE

TASKS	FY	97	98	99	00	01
Metrics/Exit Criteria						
Concept Selection						
Model & Simulate						
Validation Fabr/Test						
Full-Scale Fabr						
Demonstration Testing						

DELIVERABLES:

FY98 DELIVERABLES:
o Integrated Development System Architecture for Rapid Concept Selection and Analysis.

FY99 DELIVERABLES:
o Virtual Manufacturing and Structural Prototype Validation.
o Advanced Structural Concepts' Coupon/Element Fabrication and Test.

TECH OBJECTIVE SUPPORTED:

- o Increased Structural Efficiency.
- o Reduced Manufacturing Labor.

WORK UNIT TITLE: Helicopter Active Control Technology
 PERFORMING ORGANIZATION: AATD-AMCOM
 POC/PHONE: Mr. Bob Buckanin, (757) 878-4371/DSN 927-4371

OBJECTIVES:

- o Demonstrate Rotorcraft & Fixed-Wing Flight Control Technologies Leading to a 2nd-Gen RW Fly-By-Wire FCS.
- o 50% Reduction in the Probability of Encountering Degraded Handling Qualities Due to Flight Control System (FCS) Failure.
- o 60% Improvement in Weapons Pointing Accuracy.
- o 10% Increase in Maneuverability and Agility.
- o 30% Reduction in Flight Control System Flight Test Dev Time.

TECHNICAL CHALLENGES:

- o Lack of Knowledge of Optimal Rotorcraft Response Types and Optimum Functional Integration of FCS, Weapons Systems, and Pilot Interface.
- o Techniques for Sensing Limit Onset and Cueing Pilot.
- o Inadequate Air Vehicle Modeling; FCS Design, Optimization, and Validation Techniques.

APPROACH:

- o Integrate State-of-the-Art Rotary Wing Flight Control Technologies.
- o Exploit Advanced Fixed-Wing Flight Control Architectures and Fly-By-Light Hardware.
- o Substantial Industry Participation.
- o Use Simulation to Evaluate Candidate System Configurations.
- o Use Iron Bird Integration to Reduce Risk.
- o Demonstrate Benefits In-Flight Whenever Possible.

SCHEDULE

TASKS	FY	98	99	00	01	02
RFP & Award Contracts						
Integrated Concepts Simulation						
Preliminary Design						
Detailed Design						
Fabrication						
Installation						
Ground and Flight Test						
System Documentation						

DELIVERABLES:

- 10% Increase in Maneuverability & Agility.
- o CHPR4 or Better for Critical MTEs.
- o 40% Increase in Weapons Pointing Accuracy.
- o Demonstrate ADS-33 Compliance.

TECH OBJECTIVE SUPPORTED:

- o 60% Reduction in the Probability of Encountering Degraded Handling Qualities Due to FCS Failure (56%)
- o 60% Improvement in Weapons Pointing Accuracy (75%)
- o 15% Increase in Maneuverability and Agility (66%)
- o 50% Reduction in Flight Control System Flight Test Development Time (60%)

WORK UNIT TITLE: Composite Main Rotor Controls
 PERFORMING ORGANIZATION: AATD-AMCOM
 POC/PHONE: Chandon W. Davis, (757) 878-0169/DSN 927-0169

OBJECTIVES:

- o Increase the Life of Fatigue Limited Components in the Control System of the Main Rotor.

TECHNICAL CHALLENGES:

- o Composite Attachments.
- o Multi-Axis Loading of Composite Components.

APPROACH:

- o Select Several Fatigue Limited Components in an Existing Main Rotor.
- o Redesign for Composite Material.
- o Conduct Coupon Testing to Determine Fatigue Life.
- o Demonstrate Fatigue Life on Full Composite Components.

SCHEDULE

TASKS	FY	97	98	99	00	01
Component Selection and Analysis						
Composite Redesign						
Coupon Tests						
Component Fabrication						
Component Fatigue Test						

DELIVERABLES:

- FY98 DELIVERABLES:**
- o Composite Component Design Properties.
 - o Composite Test Coupons.

- FY99 DELIVERABLES:**
- o Composite Main Rotor Component.

TECH OBJECTIVE SUPPORTED:

- o Increased Structural Efficiency.

WORK UNIT TITLE: Ballistic Tolerant Stiffeners PERFORMING ORGANIZATION: AATD-AMCOM POC/PHONE: Mr. Nicholas J. Calapodas, (757) 878-3303/DSN 927-3303																																											
OBJECTIVES: <ul style="list-style-type: none"> o Evaluate the Z-Pinning Technology for Enhancing Ballistic Tolerance. o Investigate Z-Pinning as a Potential Replacement of Mechanical Fasteners at Selected Locations. TECHNICAL CHALLENGES: <ul style="list-style-type: none"> o Enhance Interlaminar and Peel Strength of Composite Structures. o Reduce Use of Mechanical Fasteners. 	APPROACH: <ul style="list-style-type: none"> o Design and Fabricate Helicopter Representative Primary Structures With and Without Z-Pinning. o Conduct Baseline Stiffness Static, 23mm HEI Ballistic, and Post Ballistic Testing on Both Type of Specimens and Compare Strength Results. o Conduct Static Testing of Coupon Specimens of Bonded Sub-Structures, Bonded Reinforced with Z-Pinning, and Bonded and Reinforced With Mechanical Fasteners. o Compare Results. 																																										
SCHEDULE <table border="1"> <thead> <tr> <th>TASKS</th> <th>FY</th> <th>97</th> <th>98</th> <th>99</th> <th>00</th> <th>01</th> </tr> </thead> <tbody> <tr> <td>Structural and Ballistics Analysis</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Tooling Design and Fab</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Component and Coupon Fabrication</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Testing</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Final Report</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	TASKS	FY	97	98	99	00	01	Structural and Ballistics Analysis							Tooling Design and Fab							Component and Coupon Fabrication							Testing							Final Report							DELIVERABLES: FY99 DELIVERABLES: <ul style="list-style-type: none"> o Component Design and Fabrication. o Coupon Specimen Fabrication. FY00 DELIVERABLES: <ul style="list-style-type: none"> o Component Static and Ballistic Testing. o Coupon Specimen Testing. TECH OBJECTIVE SUPPORTED: <ul style="list-style-type: none"> o Increased Structural Efficiency. o Reduced Manufacturing Labor Hrs/Lb.
TASKS	FY	97	98	99	00	01																																					
Structural and Ballistics Analysis																																											
Tooling Design and Fab																																											
Component and Coupon Fabrication																																											
Testing																																											
Final Report																																											

WORK UNIT TITLE: Digital Advanced Adaptive Controls & Diagnostics (DAACAD) Program PERFORMING ORGANIZATION: AATD-AMCOM POC/PHONE: Mr. Bert Smith, (757) 878-2400/DSN 927-2400																																											
OBJECTIVES: <ul style="list-style-type: none"> o Improve Digital Fuel Controls Technology for Turbo shaft Engines. TECHNICAL CHALLENGES: <ul style="list-style-type: none"> o Stability vs Response (R. Droop) o Cost, Weight, Integration of New Components. 	APPROACH: <ul style="list-style-type: none"> o Integrate Army Adaptive Fuel Controls Features Into Advance Control. o Improve Diagnostics Capability & Integrate With ATEDS Type Format. o Integrate Active Combustor & Active Stall/ Surge Control. 																																										
SCHEDULE <table border="1"> <thead> <tr> <th>TASKS</th> <th>FY</th> <th>98</th> <th>99</th> <th>00</th> <th>01</th> <th>02</th> </tr> </thead> <tbody> <tr> <td>Design</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fabrication</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Rig Test</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Analysis</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Final Report</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	TASKS	FY	98	99	00	01	02	Design							Fabrication							Rig Test							Analysis							Final Report							DELIVERABLES: <ul style="list-style-type: none"> o Software/Hardware Package to be Integrated and Demonstrated in Advanced Full-Up Engine Program. TECH OBJECTIVE SUPPORTED: <ul style="list-style-type: none"> o Improved SFC/Performance. o Improved R&M, Survivability. o Lower Cost and Weight.
TASKS	FY	98	99	00	01	02																																					
Design																																											
Fabrication																																											
Rig Test																																											
Analysis																																											
Final Report																																											

WORK UNIT TITLE: Advanced Combustor
 PERFORMING ORGANIZATION: AATD-AMCOM
 POC/PHONE: Mr. Robert Bolton, (757) 878-3977/DSN 927-3977

OBJECTIVES:

- o Develop High Temperature Combustor for a Turbo shaft Engine (3000 SHP Class).

TECHNICAL CHALLENGES:

- o Low Pattern Factor.
- o High Temperature Capability.
- o Durability.
- o Operability.
- o Cost & Weight.

APPROACH:

- o Utilize Advanced Cooling Scheme.
- o Apply Advanced 3-D CFD Tools to Provide High Performance and Durability.

SCHEDULE

TASKS	FY	98	99	00	01	02
Aero/Mech Design						
FAB						
Hot Rig Test						

DELIVERABLES:

- o Award CRDA in FY99.

TECH OBJECTIVE SUPPORTED:

- o High Inlet and Outlet Temperatures.
- o Low Pattern Factor (0.10).
- o High Power/Weight Ratio.
- o Reduced Cost.

WORK UNIT TITLE: Advanced Multi-Spectral Coatings
 PERFORMING ORGANIZATION: AATD-AMCOM
 POC/PHONE: Mr. Jerry Clifford, (757) 878-5838/DSN 927-5838

OBJECTIVES:

- o To Develop Advanced IR Paints/Coatings That are Compatible With RAM/RAS Structures.
- o IR & RF Transparent Binders.
- o Low Emissivity, Low Dielectric Pigments.
- o Encapsulated Metal Pigments.
- o Microsphere/Microballon Pigments.
- o Improved Control of Thermal Emissions and Solar Reflections.

TECHNICAL CHALLENGES:

- o Current Low Emissivity IR Coatings Rely Heavily on Metal Pigments Which Can Be Highly Reflective to RF Energy if a Conductive Path is Established Between These Metal Flakes.
- o Metal Pigments are Highly Reflective to Solar Energy Which Causes High Levels of Solar Glint From Painted Surfaces.

APPROACH:

- o Evaluate and Test Current Binder Systems for IR and RF Transmission.
- o Evaluate and Test Low Dielectric and Encapsulated Metal Pigments for IR Emissivity and RF Transmissivity.
- o Evaluate and Test Microsphere/Microballon Pigments for IR Emissivity and RF Transmissivity.
- o Evaluate and Test Advanced Coating/Structure Systems for Emission and Reflection Control.
- o Mix and Test Candidate Coating for Panel Testing of RF Transmission, IR Emission, and Optical BRDF.
- o Flight Test Coatings on Aircraft With Thermally Loaded RAM/RAS Structures.

SCHEDULE

TASKS	FY	97	98	99	00	01
Evaluate and Test Binders						
Evaluate and Test Pigments for RF Transmission, IR Emission, Optical BRDF						
Evaluate an Advanced Coating System						
Mix and Test Candidate Coatings						
Flight Test Coatings						
Prepare Final Report						

DELIVERABLES:

- o Advanced IR Coating System That Can be Applied to RAM/RAS Structures.
- o Advanced IR Coating System That Can Reduce the Solar Glint Produced With Current Low Emissivity Coatings.
- o Flight Test Data Including Acquisition and Lock-On Ranges With and Without Advanced Coatings.

TECH OBJECTIVE SUPPORTED:

- o 35%/50% Reduction in IR Signature.

2

WORK UNIT TITLE: Advanced Combustor
 PERFORMING ORGANIZATION: AATD-AMCOM
 POC/PHONE: Mr. Robert Bolton, (757) 878-3977/DSN 927-3977

OBJECTIVES:

- o Develop High Temperature Combustor for a Turbo shaft Engine (3000 SHP Class).

TECHNICAL CHALLENGES:

- o Low Pattern Factor.
- o High Temperature Capability.
- o Durability.
- o Operability.
- o Cost & Weight.

APPROACH:

- o Utilize Advanced Cooling Scheme.
- o Apply Advanced 3-D CFD Tools to Provide High Performance and Durability.

SCHEDULE

TASKS	FY	98	99	00	01	02
Aero/Mech Design			■	■		
FAB					■	■
Hot Rig Test						■

DELIVERABLES:

- o Award CRD A in FY99.

TECH OBJECTIVE SUPPORTED:

- o High Inlet and Outlet Temperatures.
- o Low Pattern Factor (0.10).
- o High Power/Weight Ratio.
- o Reduced Cost.

2

WORK UNIT TITLE: Rotorcraft Air Combat Enhancement (RACE)
 PERFORMING ORGANIZATION: AATD-AMCOM
 POC/PHONE: Mr. John Shostak, (757) 878-4101/DSN 927-4101

OBJECTIVES:

- o Demonstrate the Rotorcraft Integration of Weaponization Technologies That Provide Enhanced Air-to-Air Capability for Army Aviation to Defeat Airborne Threats and Protect Itself and Friendly Forces.

WARFIGHTING CAPABILITIES:

- o Improved Survivability.
- o Enhanced Multimission Role.
- o Increased Weapons Efficiency.

SCHEDULE

TASKS	FY	01	02	03	04	05
Prelim Design		■				
Prelim Design Review			▲			
Detailed Design			■	■		
Detailed Design Rev				▲		
HDW Fabrication				■	■	
Software MODS				■	■	
A/C Integration					■	
Flight Demos						■
Final Review						▲

PLANNED ACCOMPLISHMENTS:

- o FY01 - Conduct Preliminary Design & Review.
- Initiate Detailed Design.
- o FY02 - Complete Detailed Design & Review.
- Initiate Hardware Fabrication.
- Initiate Software Modifications.
- o FY03 - Complete Hardware Fabrication.
- Continue Software Mods.
- o FY04 - Complete Software Mods.
- Initiate Aircraft Integration.
- o FY05 - Complete Aircraft Integration.
- Conduct Flight Demos.
- Conduct Final Review.

WORK UNIT TITLE: Airborne Manned/Unmanned System Technology System (AMUST)
 PERFORMING ORGANIZATION: AATD-AMCOM
 POC/PHONE: Mr. Steve Parker, (757) 878-4018/DSN 927-4018

OBJECTIVES:

- o Demonstrate the Capability for Advanced Manned and Unmanned Airborne Systems to Effectively Function Together to Potentially Increase the Battlefield Effectiveness of the Combined Arms Team.

WARFIGHTING CAPABILITIES:

- o Increased Survivability (Manned System).
- o Increase Lethality.
- o Expanded Operational Effectiveness.
- o Improved Target Acquisition/Positive IFF.
- o Improved Battle Damage Assessment.
- o Maximize Utility of Weaponry Effective Range.

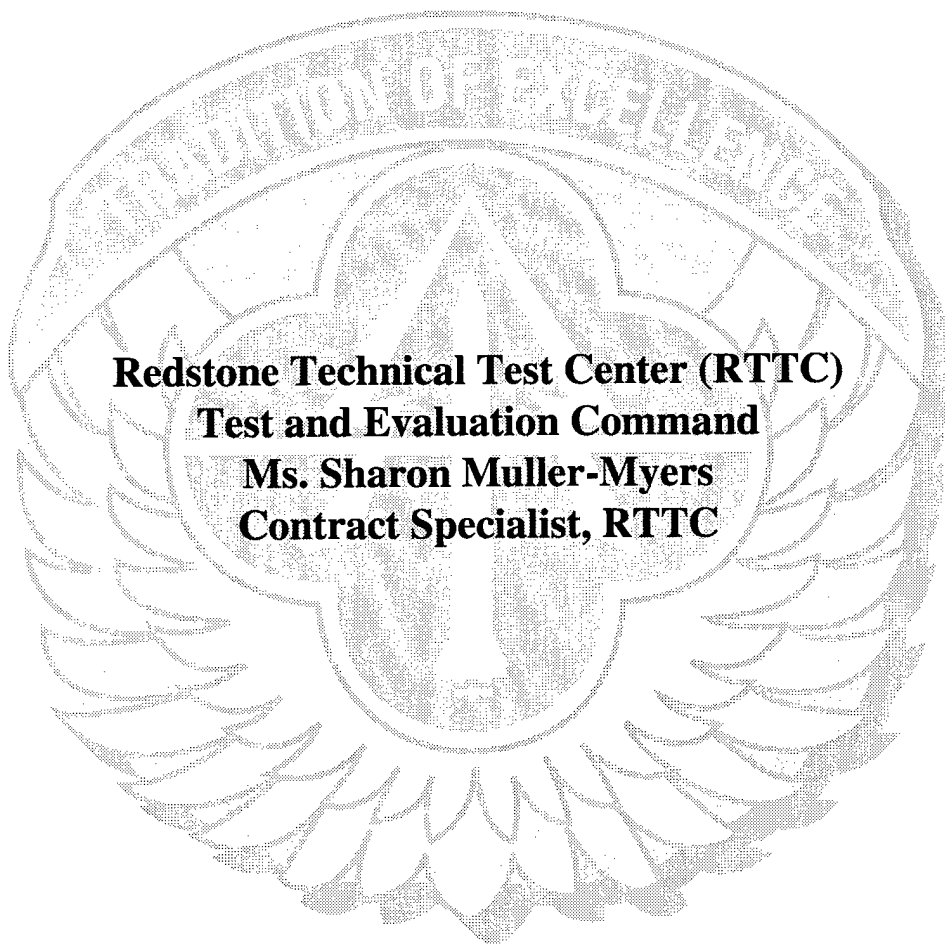


SCHEDULE

TASKS	FY	98	99	00	01	02
CONCEPT DEFINITION PHASE						
Tradeoff Analysis - Simulation						
Functional Definition						
Demonstrations						
- Intrepid Vanguard						
- ACT II						
SYSTEM DEVELOPMENT & TEST						
System Definition & Design						
Development & Prototyping						
Integration						
Test & Evaluation						
Analysis						
Transition						

PLANS:

- FY00 - Conduct System Definition.
 - Conduct Preliminary Design.
 - Initiate Component Development/Prototyping.
- FY01 - Conduct Detailed System Design.
 - Complete Development/Prototyping.
 - Initiate System Integration.
- FY02 - Conduct Component and Subsystem Test.
 - Complete System Integration.
- FY03 - Conduct System Level Test and Analysis
 - Co-Develop Transition Plan.



Redstone Technical Test Center (RTTC)

Test and Evaluation Command

Ms. Sharon Muller-Myers

Contract Specialist, RTTC

1997 APBI AGENDA

**U.S. ARMY AVIATION & MISSILE COMMAND
ADVANCE PLANNING BRIEFING FOR INDUSTRY**

MONDAY, OCTOBER 20, 1997

1300 - 1600 EARLY REGISTRATION - SPARKMAN AUDITORIUM (Bldg. 5304)

TUESDAY, OCTOBER 21, 1997

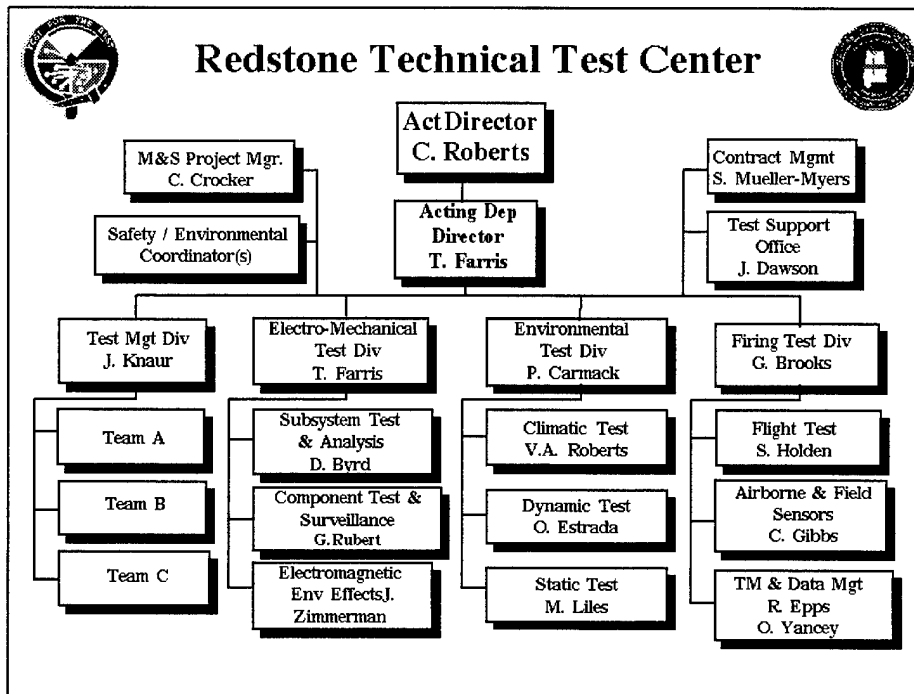
- 0730 - Registration - Sparkman Center Auditorium (Bldg. 5304)**
- 0815 - Administrative Announcements**
Ms. Tammy S. Williams, Acting Technical Industrial Liaison, Technology Integration Office, Missile Research, Development, and Engineering (MRD&E) Center, U.S. Army Aviation & Missile Command (USAAMCOM)
- 0820 - Welcome**
MG Emmitt E. Gibson, Commanding General, USAAMCOM
- 0835 - U.S. Army Aviation & Missile Command Overview**
Mr. John M. Moore, Resource Management Directorate
- 0905 - BREAK**
- 0930 - Deputy for Systems Acquisition**
BG Robert E. Armbruster, Deputy for Systems Acquisition
- 1015 - Program Executive Office for Tactical Missiles (PEO-TM)**
Ms. Vicky L. Armbruster, Deputy Program Executive Officer, Tactical Missiles
- 1100 - Program Executive Office for Air & Missile Defense (PEO-AMD)**
Mr. A. Q. Oldacre, Deputy Program Executive Officer, Air and Missile Defense
- 1145 - LUNCH at the Redstone Officers' Club**
Dr. Michael Andrews, Director for Technology Office of the Assistant Secretary of the Army Research, Development, and Acquisition
- 1345 - Program Executive Office for Aviation**
Mr. Paul Bogosian, Deputy Program Executive Officer, Aviation
- 1415 - TRADOC Keynote Address**
COL Mark P. Gay, Director, Future Battle Directorate, U.S. Army Training and Doctrine Command
- 1500 - BREAK**
- 1530 - Missile RD&E Center Vision and Strategic Plan**
Dr. William C. McCorkle, Technical Director for Missiles, USAAMCOM and Executive Director Missile RD&E Center

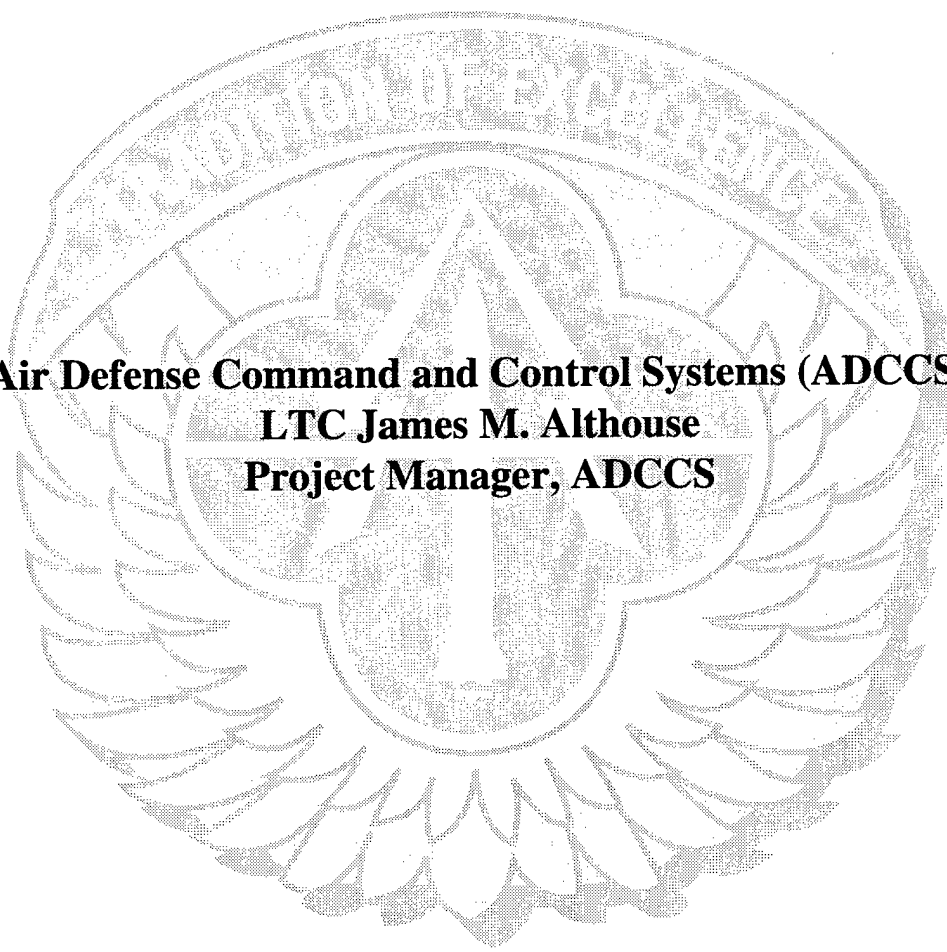
- 1615 - **Aviation RD&E Center Vision and Strategic Plan**
*Mr. Tom L. House, Technical Director for Aviation,
USAAMCOM and Executive Director Aviation RD&E Center*
- 1700 - **Question and Answer Session**
*Dr. William C. McCorkle, Technical Director for Missiles,
USAAMCOM, and Executive Director Missile RD&E Center*
- 1800 - **Reception - Redstone Arsenal Officers' Club**

WEDNESDAY, OCTOBER 22, 1997

- 0800 - **Announcements**
*Ms. Tammy S. Williams, Acting Technical Industrial Liaison,
Technology Integration Office, Missile RD&E Center*
- 0805 **Missile RD&E Center Opportunities**
*Dr. Paul L. Jacobs, Associate Director for Technology,
Missile RD&E Center*
- 0845 **Aviation RD&E Center Contract Opportunities**
*Mr. Robert V. Kennedy, Associate Director for Technology,
Aviation RD&E Center*
- 0930 - **BREAK**
- 1000 - **Integrated Materiel Management Center (IMMC)**
Mr. John R. Chapman, Deputy Director, IMMC
- 1015 - **Redstone Technical Test Center (RTTC)
Test and Evaluation Command**
Ms. Sharon A. Mueller-Myers, Contracts Specialist, RTTC
- 1035 - **Instrumentation, Targets, and Threat Simulators (ITTS)**
*Mr. Henry I. Jehan, Jr. ITTS, U.S. Army Simulation, Training,
and Instrumentation Command*
- 1100 - **Redstone Arsenal Support Activity (RASA)**
COL Duane E. Brandt, Commander, RASA
- 1115 - **Resource Management Directorate**
*Mr. William G. Matthews, Deputy Director,
AMCOM Resource Management Directorate*
- 1135 - **Air Defense Command and Control Systems (ADCCS)**
LTC James M. Althouse, Project Manager, ADCCS
- 1150 - **LUNCH at the Redstone Officers' Club**
*Mr. Laurence H. Burger, Director, U.S. Army Space and
Missile Defense Command's Space and Missile Battle Lab*
- 1340 - **Acquisition Review**
*Ms. L. Marlene Cruze, Director,
AMCOM Acquisition Center*

- 1400 - **Legislative Initiatives**
AMCOM Legal Office
- 1420 - **BREAK**
- 1450- **Command Ombudsman**
Mr. John W. Finafrock, AMCOM Ombudsman
- 1510 - **Small Business Office**
Mr. John F. Nelson, Small Business Advocate,
Small and Disadvantaged Business Utilization Office
- 1530 - **Question and Answer Session**
Dr. William C. McCorkle, Technical Director for Missiles,
USAAMCOM, and Executive Director Missile RD&E Center





Air Defense Command and Control Systems (ADCCS)
LTC James M. Althouse
Project Manager, ADCCS

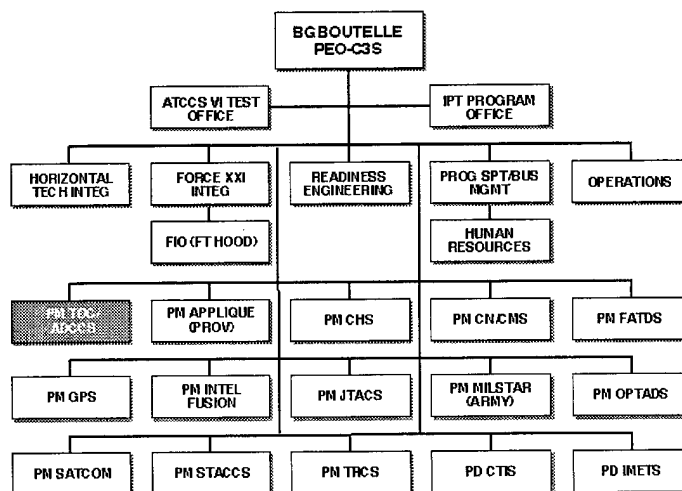


1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY



PROGRAM EXECUTIVE OFFICE COMMAND, CONTROL, AND COMMUNICATIONS SYSTEMS

*1997
Advance
Planning
Briefing for
Industry*



CC-PAKROD

19 AUG 97



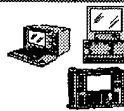
BUILDING BLOCKS

1997
Advance
Planning
Briefing for
Industry

COMMON HARDWARE AND PERIPHERALS

CHS I

- TRANSPORTABLE COMPUTER UNIT
- LIGHTWEIGHT COMPUTER UNIT
- HANDHELD TERMINAL UNIT



CHS II

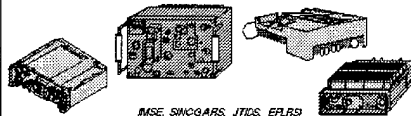
- V1 AND V2 AVAILABLE NOW
- HIGH CAPACITY COMPUTER UNIT
- HANDHELD TERMINAL UNIT

COMMON SOFTWARE

- ARMY BATTLE COMMAND SYSTEMS (ABCS) BATTLEFIELD FUNCTIONAL AREA (BFA) APPLICATION
- JOINT COMMON OPERATING ENVIRONMENT (JCCE)
- COMMERCIAL OFF-THE-SHELF SOFTWARE (COTS)
- COMMERCIAL STANDARDS AND PROTOCOLS (e.g., TCP/IP, CLIENT-SERVER)

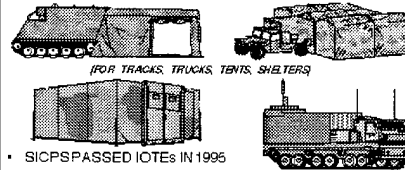


ARMY STANDARD COMMUNICATIONS



- NEAR-TERM DATA RADIO (NDR) FIRST USED FOR DIVISION ADVANCED WARFIGHTING EXPERIMENT (DAWE)
- EXISTING SYSTEMS BEING IMPROVED

STANDARD INTEGRATED COMMAND POST SHELTERS



- SICP SPASSED IOTEs IN 1995
- C2V INITIAL DELIVERY AUG 95

CC-PA-M001E

15 OCT 97



PM TOC PROGRAMS

1997
Advance
Planning
Briefing for
Industry

CINCTMD CELLS



AVIATION-LIGHT INF TOC (BDE/BN)



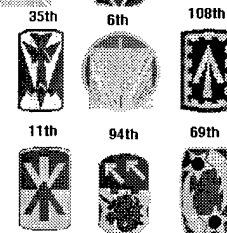
ARCENT ADAC2



FORCE XXI



ADA BRIGADES



III CORPS USARSPACE

TMD FTOC 3rd ARMY "LUCKY MAIN"

AAMDC XVIII ABN CORPS BCD & "DRAGON MAIN"

SOUTHCOM 8th ARMY

CC-PA-G004D

14 OCT 97



1997
Advance
Planning
Briefing for
Industry

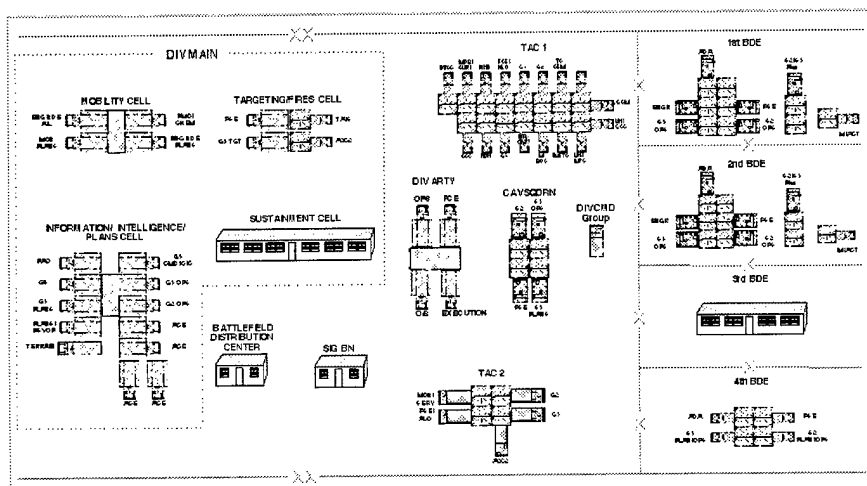
FORCE

XXI



DIVISION XXI TOC PLAN (BUILT AND DELIVERED)

1997
Advance
Planning
Briefing for
Industry



CC-PA-1001E

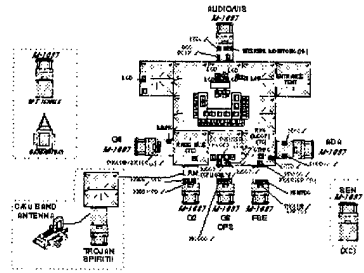
14 OCT 97



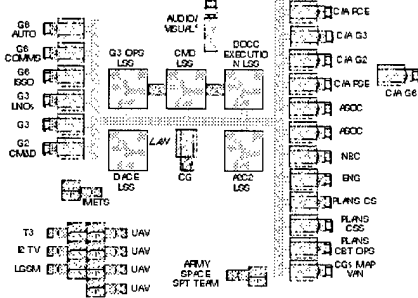
III CORPS SLICE (BUILT AND DELIVERED)

1997
Advance
Planning
Briefing for
Industry

ASSAULT COMMAND POST



MAIN COMMAND POST



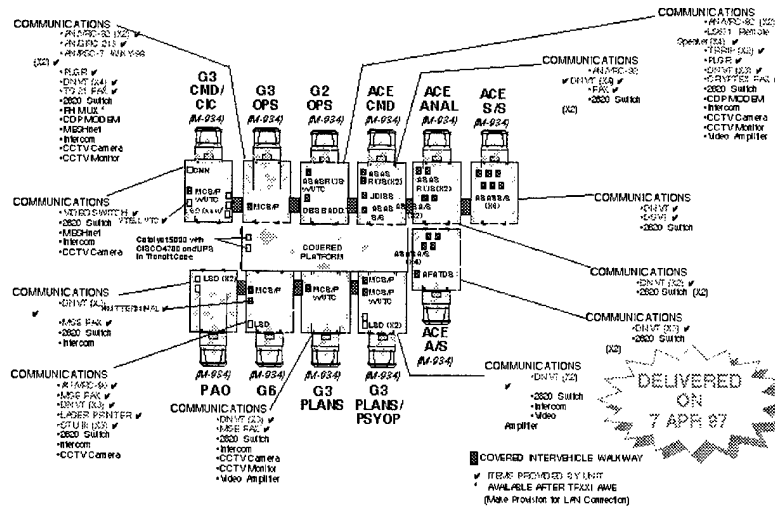
CC-PM-10011

14 OCT 97



SYSTEMS ARCHITECTURE 4ID INFORMATION/ INTELLIGENCE/PLANS CELL (IIP)

1997
Advance
Planning
Briefing for
Industry



AV09C

30 SEP 97



1997
Advance
Planning
Briefing for
Industry

ARMY TOC PROGRAM



1997
Advance
Planning
Briefing for
Industry

ARMY TOC PROGRAM MISSION

**DEVELOP AND FIELD OPERATIONALLY EFFECTIVE
AND SUPPORTABLE INTEGRATED, DIGITIZED TACTICAL
OPERATIONS CENTERS THAT SATISFY THE FUNCTIONAL
INFORMATION REQUIREMENTS OF COMMANDERS AND
STAFFS AT ALL ECHELONS OF COMMAND**

00102

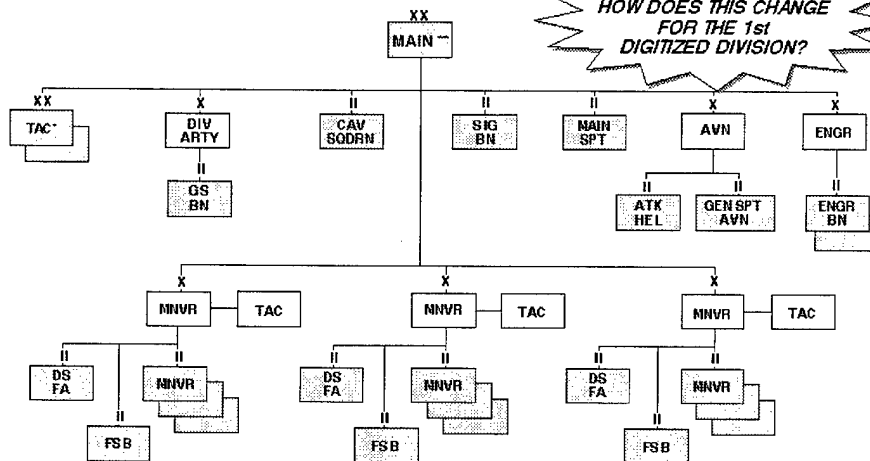
2 MAY 97



TOCs TO BE DIGITIZED NOTIONAL DIVISION

1997
Advance
Planning
Briefing for
Industry

HOW DOES THIS CHANGE
FOR THE 1st
DIGITIZED DIVISION?



¹ INCLUDES ADA AND MI
^{2,3} INCLUDES DISCOM HQ

TOTAL: 36 TOCs - 180 VEHICLES

D 40108

30 SEP 97



ARMY TOC PROGRAM DRAFT FIELDING SCHEDULE

1997
Advance
Planning
Briefing for
Industry

FIELD FIRST DIGITIZED
DIVISION BY FY00

	FY98	FY99	FY00
	1 2 3 4	1 2 3 4	1 2 3
4ID			
III CORPS			

SUSTAIN
ONLY

SUSTAIN
UPGRADE
INTEGRATE AND
RENEW

CURRENT POM
SUPPORTS UPGRADE/
FIELDING OF 132 TOCs

FIELD FIRST DIGITIZED CORPS
BY FY04

	FY98	FY99	FY00	FY01	FY02	FY03	FY04
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
1ST CAV DIV							
III CORPS							
3RD ACE							
REMAINDER OF U.S. ARMY							
TOTAL TOCs							
UPGRADED		23	0	0	0	0	0
NEW		20	20	18	30	21	TBD

ARLJG

19 OCT 97



ARMY TOC PROGRAM FUTURE TASKS

1997
Advance
Planning
Briefing for
Industry

- SYSTEM DESIGN STUDIES
- SYSTEM ENGINEERING
- GFE/CFE INTEGRATION/ASSEMBLY (I.E., CHS, SICPS, HMMWV, COMMO)
- CABLE/RACK FABRICATION/ASSEMBLY AND SHELTER MODIFICATION
- SYSTEM DOCUMENTATION/CONFIGURATION MANAGEMENT
- SYSTEM TEST AND EVALUATION
- TRAINING
- FIELDING SUPPORT
- CONTRACTOR LOGISTICS SUPPORT

0006

14 OCT 97



ARMY TOC PROGRAM CONTRACT OPPORTUNITIES

1997
Advance
Planning
Briefing for
Industry

OBJECTIVE: FIELD THE FIRST DIGITIZED DIVISION BY FY00 AND
FIRST DIGITIZED CORPS BY FY04

TENTATIVE PLAN:

FY98 SUSTAIN DIVISION AWE - CONFIGURED TOCs

FY99-00 REFURBISH DIVISION AWE TOCs AND
COMPLETE INTEGRATION OF 4th ID

FY00-04 INITIATE POM-SUPPORTED ARMY TOC
PROGRAM TO DEVELOP AND FIELD FIRST
DIGITIZED CORPS (III CORPS, 1CD, 3ACR)

- » 93 TOCs
- » 369 VEHICLES
- » AWARD 1ST QTR FY00

* ASSURES FUNDING

0003

15 OCT 97



KEY HARDWARE RELATED TECHNOLOGIES

1997
Advance
Planning
Briefing for
Industry

NEED INDUSTRY'S HELP IN:

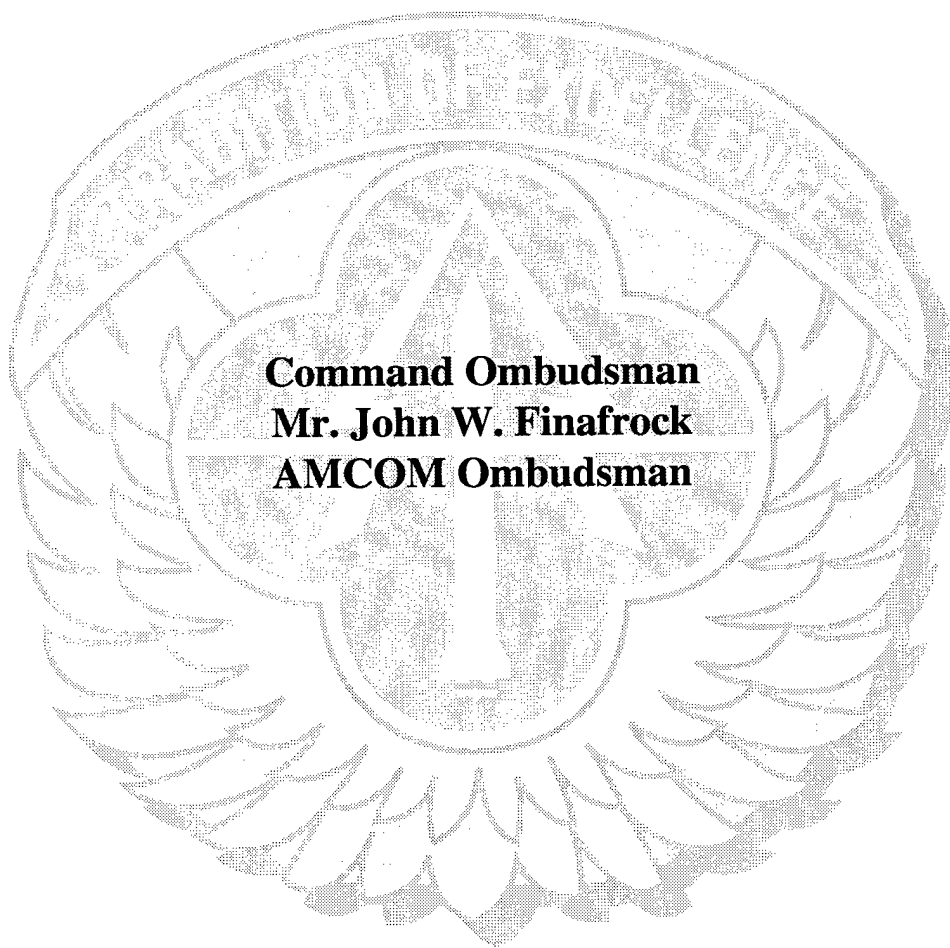
- DISPLAYS
- VIDEO SYSTEMS (E.G. CAMERAS/CLOSED CAPTION TELEVISION (CCTV))
 - WIRELESS LANs & INTERCOMS
 - ROUTERS & SWITCHES
 - POWER GENERATION
 - MEDIA STORAGE
 - OTHER NON-DEVELOPMENTAL ITEM (NDI) OR COMMERCIAL-OFF-THE-SHELF (COTS)



LOW COST, RECONFIGURABLE, RELIABLE, COMMERCIAL
- JOINT TECHNICAL ARCHITECTURE - ARMY COMPLIANT

10A27

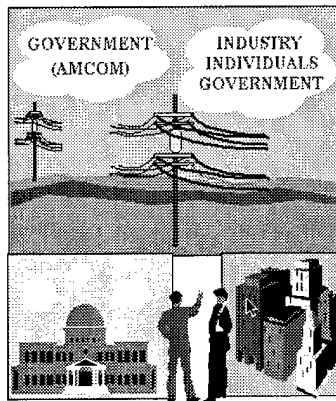
15 OCT 97



**Command Ombudsman
Mr. John W. Finafrock
AMCOM Ombudsman**



U.S. ARMY AVIATION AND MISSILE COMMAND COMMAND OMBUDSMAN



MR. JOHN W. FINAFROCK, AMCOM OMBUDSMAN

U.S. ARMY AVIATION AND MISSILE COMMAND

ATTN: AMSAM-OB

BUILDING 5300, ROOM 5145

REDSTONE ARSENAL, AL 35898-5000

1 OF 8



U.S. ARMY AVIATION AND MISSILE COMMAND



WHAT'S AN OMBUDSMAN?

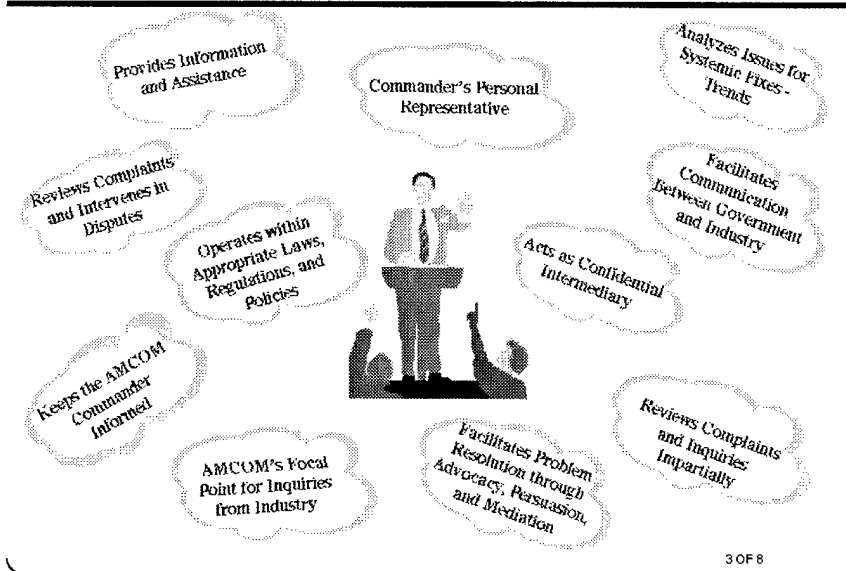
"OMBUDSMAN: AN INDEPENDENT SENIOR GOVERNMENT OFFICIAL WITH RESPONSIBILITY TO RECEIVE AND ACT ON INQUIRIES AND COMPLAINTS CONCERNING THE MSC, WHICH ARE BROUGHT TO HIS ATTENTION BY INDUSTRY, THE PRIVATE SECTOR, OR INTERNAL GOVERNMENT SOURCES"

U.S. ARMY MATERIEL COMMAND

2 OF 8



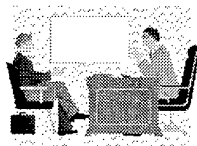
U.S. ARMY AVIATION AND MISSILE COMMAND THE COMMAND OMBUDSMAN'S CHARTER



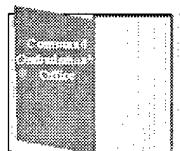
3 OF 8



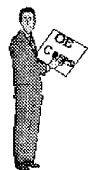
U.S. ARMY AVIATION AND MISSILE COMMAND "GENERAL" INFORMATION



Confidential Intermediary Approach



Current Office Location Conducive to
Contacts - - "Discreetly Walk Off Hallway"
Building 5300, Room 5145 (First Floor)



Cases Generally Fall into These Categories:

- 30-40% Solicitations
- 20-30% Contracts
- 15-25% Business Opportunities
- 5-8% Personal Issues

Mix Varies
Over Time

4 OF 8



U.S. ARMY AVIATION AND MISSILE COMMAND



AMCOM OMBUDSMAN CASE ACTIVITY

STATEMENTS OF
WORK

TRACKING
DISBURSEMENTS

TECHNICAL
DATA
PACKAGES

SOLICITATION
CLOSING
DATES

LATE
PAYMENT
ISSUES

INTERVENE WITH
OTHER
GOVERNMENT
ORGANIZATIONS

FACILITATE
INDUSTRY
MARKETING
CAPABILITIES

MILITARY
SPECIFICATIONS
AND
STANDARDS

ORAL
SOLICITATION
PROCESS

FIRST ARTICLE
TEST

BEST VALUE
CONTRACTING

PROVIDE POINTS
OF CONTACT

QUALITY
VERIFICATION
SAMPLE

RESOLVE
PERSONAL
ISSUES

5 OF 8



U.S. ARMY AVIATION AND MISSILE COMMAND



OMBUDSMAN ISSUES/CASE LOAD TRENDS

SIC CODES

BEST VALUE:
BAFO = PRICE
COMPETITION

MULTIPLE
AWARDS
"COMPETITION?"

PRIVATIZATION -
QDR RESULTS
INQUIRIES

HOW CAN S&B/
SADBU/SB/WOMAN-
OWNED BUSINESSES
WIN PRIME CONTRACTS
UNDER ACQUISITION
REFORM?

USE OF ATCOM PATS
IN AMCOM -
POSSIBILITY
OF AMCOM PATS?

ORAL PROPOSALS
- DISCUSSIONS
- PRESENTATIONS

MARKETING INTERESTS -
A76 STUDY CAPABLE
FIRMS

"AWARD W/OUT DISCUSSION?" -
MAKE COMPETITIVE RANGE
MEANINGFUL ON SUPPORT
SERVICES CONTRACTS

CONSPIRACY THEORIES AROUND -
SIC CODE CHANGES TARGETED -
COMPLAIN OR PROTEST
AND YOU ARE BLACKBALLED

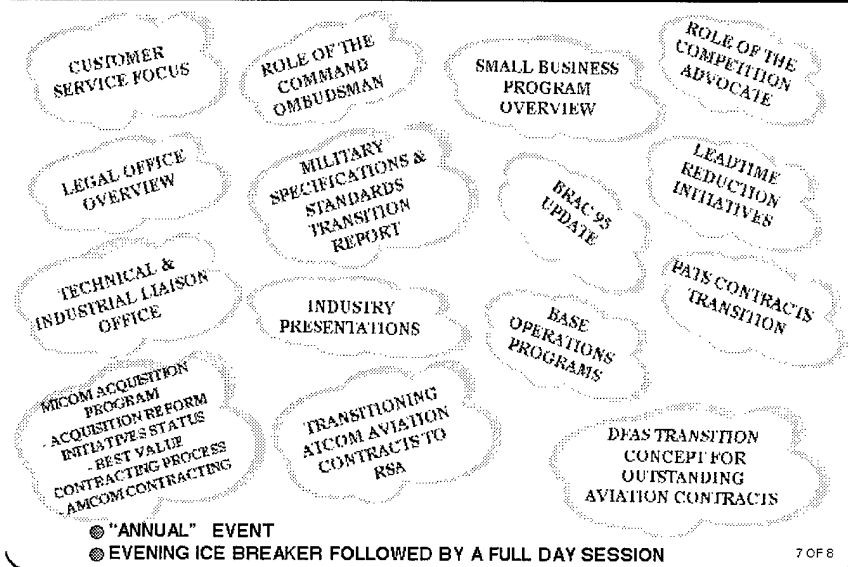
6 OF 8



U.S. ARMY AVIATION AND MISSILE COMMAND



INDUSTRY DAYS TOPICS



U.S. ARMY AVIATION AND MISSILE COMMAND



OMBUDSMAN PROGRAM

AMC OMBUDSMAN: MR. LEWIS J. ASHLEY VOICE: (703) 617-8252 / DSN 767-8252
DATAFAX: (703) 617-1829 / DSN 767-8219
E-MAIL: amcob@alexandria-emh1.army.mil

IOC OMBUDSMAN: MR. CRAIG COLLEDGE VOICE: (309) 782-5880/5379 / DSN 793-5880/5279
DATAFAX: (309) 782-8469 / DSN 793-8469
E-MAIL: amsio-br@ria-emh2.army.mil

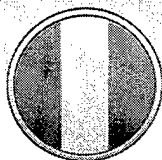
CECOM OMBUDSMAN: MS. KATHLEEN DAVIS VOICE: (908) 532-3320/1467 / DSN 992-3320/1467
DATAFAX: (908) 532-6020 / DSN 992-6020
E-MAIL: davisk@doim6.monmouth.army.mil

AMCOM OMBUDSMAN: MR. JOHN FINAFROCK VOICE: (205) 876-6659 / DSN 746-6659
DATAFAX: (205) 955-7753 / DSN 645-7753
E-MAIL: Finafrock-JW@redstone.army.mil

TACOM OMBUDSMAN: MS. ANN NEWELL VOICE: (810) 574-5274/7662 / DSN 786-5274/7662
DATAFAX: (810) 574-5011/5097 / DSN 786-5011/5097
E-MAIL: newella@cc.tacom.army.mil

8 OF 8

THE ARMY AFTER NEXT PROJECT



KNOWLEDGE *and* SPEED

Deputy Chief of Staff for Doctrine
United States Army Training and Doctrine Command

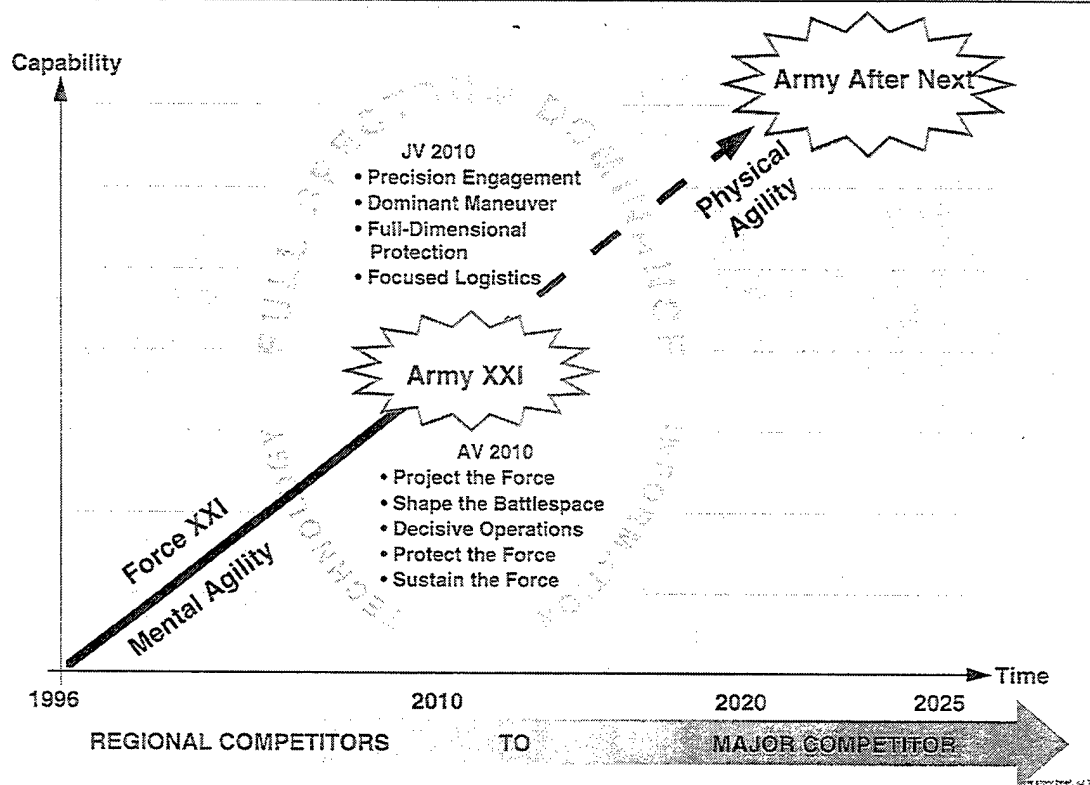


PROJECT AAN MISSION STATEMENT

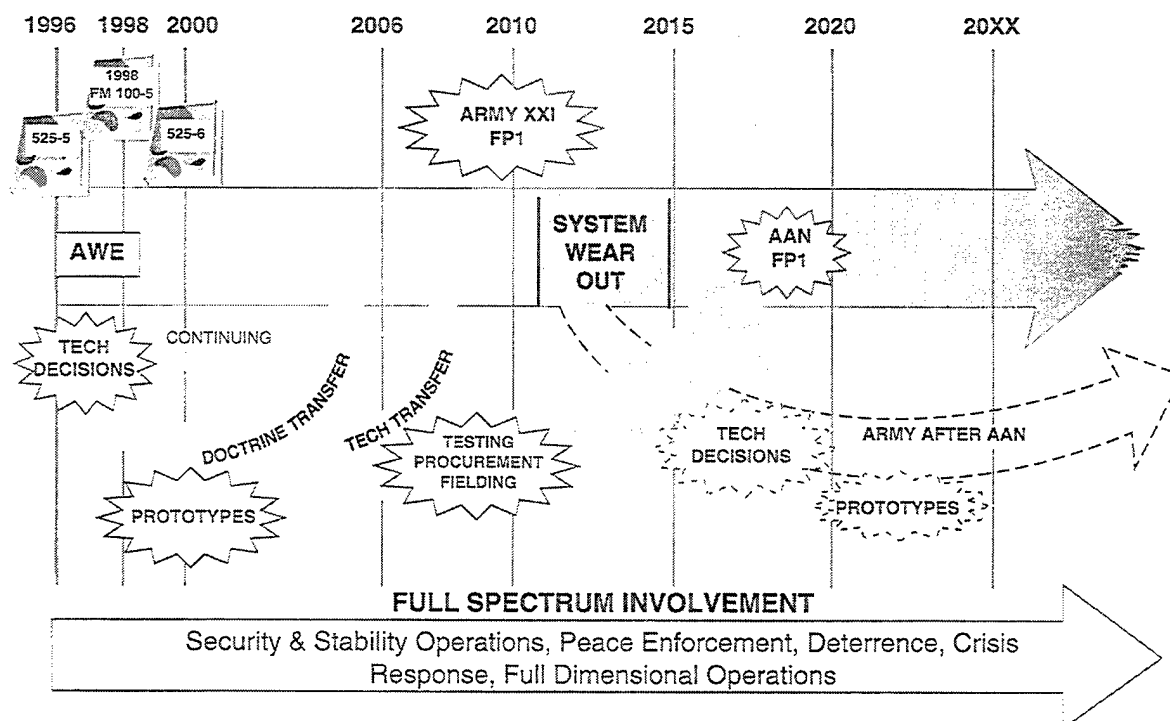
Conduct broad studies of warfare to about the year 2025 to frame issues vital to the development of the U.S. Army after about 2010 and provide those issues to senior Army leadership in a format suitable for integration into TRADOC combat development programs.



THE PATH TO AAN MUST PASS THROUGH FORCE XXI

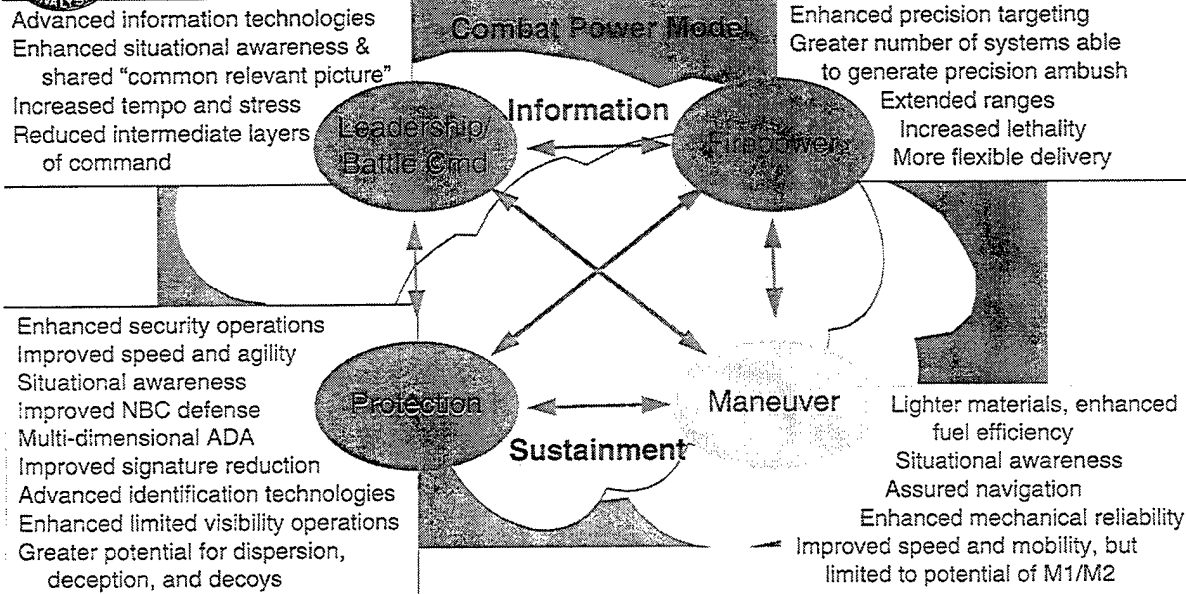


INFLUENCES ON THE ARMY'S FUTURE - GETTING TO AAN AND BEYOND





The Evolving Elements of Combat Power

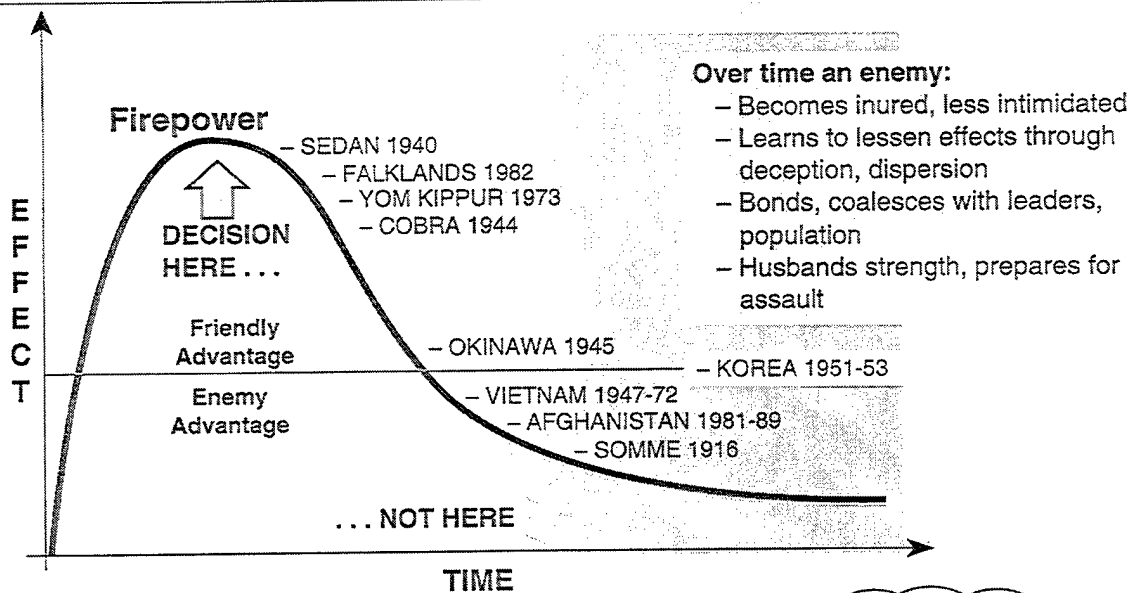


- **Information technologies will enable quantum increases in Battle Command, especially with introduction of anticipatory planning**
- **Geometric increases in firepower and protection effects are expected but**
 - *only arithmetic increases in maneuver effects are envisioned*

7

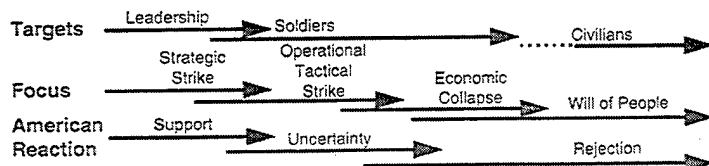


FIREPOWER-CENTERED APPROACH: UNNECESSARY RISK. FIREPOWER EFFECT DECLINES OVER TIME



Over time an enemy:

- Becomes inured, less intimidated
- Learns to lessen effects through deception, dispersion
- Bonds, coalesces with leaders, population
- Husbands strength, prepares for assault



Provides enemy the advantage of concentrating resources to counter only one dimension of threat



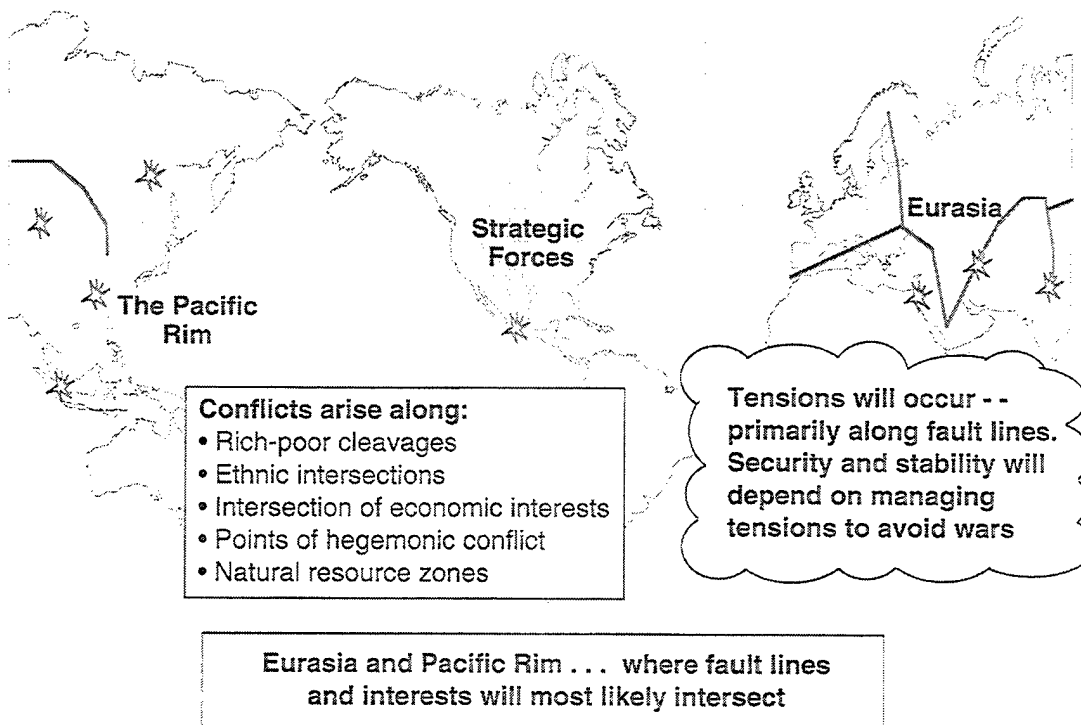
AAN FUTURES RESEARCH FOCUSES INITIALLY ON FOUR AREAS CIRCA 2025:

- Probable geopolitical realities: **Ensure stability across the spectrum**
- Evolving military art: **Balance Precision Engagement and Dominant Maneuver**
- Technology: **Speed to exploit Information Dominance**
- Human and organizational behavior: **Mature, cohesive force operating at the limits of human cognition**

www.aan.org 12/07

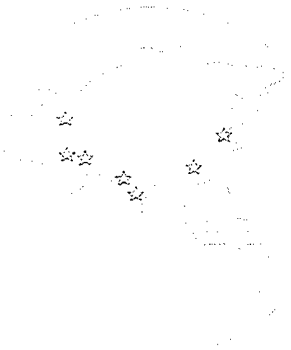


GEOPOLITICS of 2025





SEVEN YEARS into the 21st CENTURY WE SEE a RISING PATTERN of ASYMMETRY



Among our potential foes there's a common, almost spontaneous movement to posture themselves for asymmetric competition

- Streamlining current forces
- Education/professionalization
- Regional focus on local hegemony
- Shifting operational concepts –deflect air and sea power to preserve standing armies

	Army	Asymmetric Investments					
India	980,000						
North Korea	1,000,000						
Pakistan	520,000						
Iran	345,000						
Iraq	350,000						
Russia	670,000						
China	2,200,000						

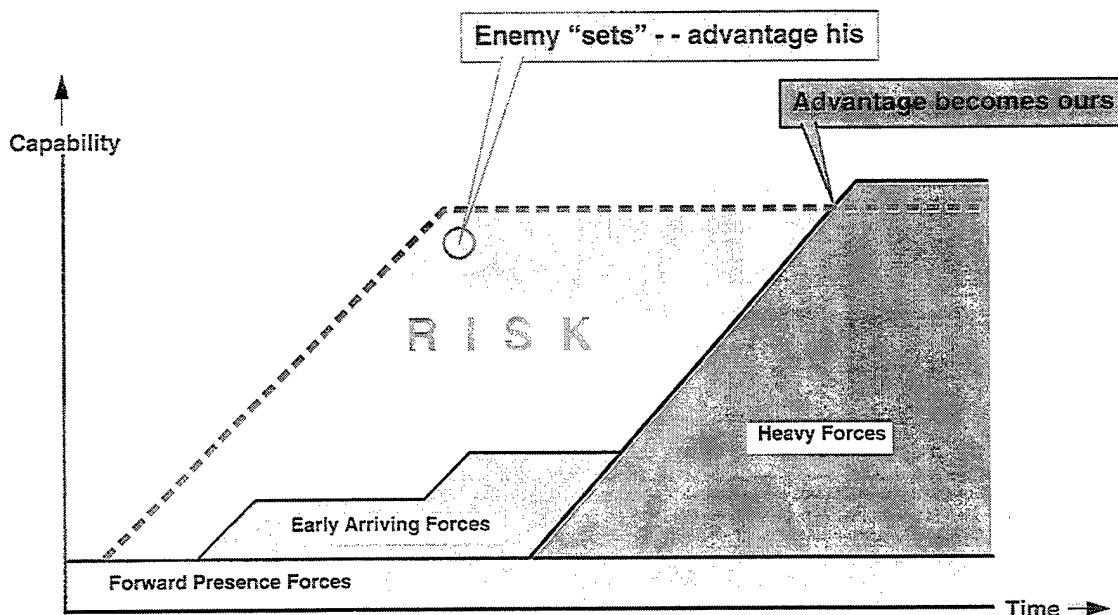
Legend:

- Missiles (Ballistic and Cruise)
- Air Defense
- Submarines
- C⁴I/IW
- WMD
- Fighters
- Missile Ships

new strategy brief, Jul 97



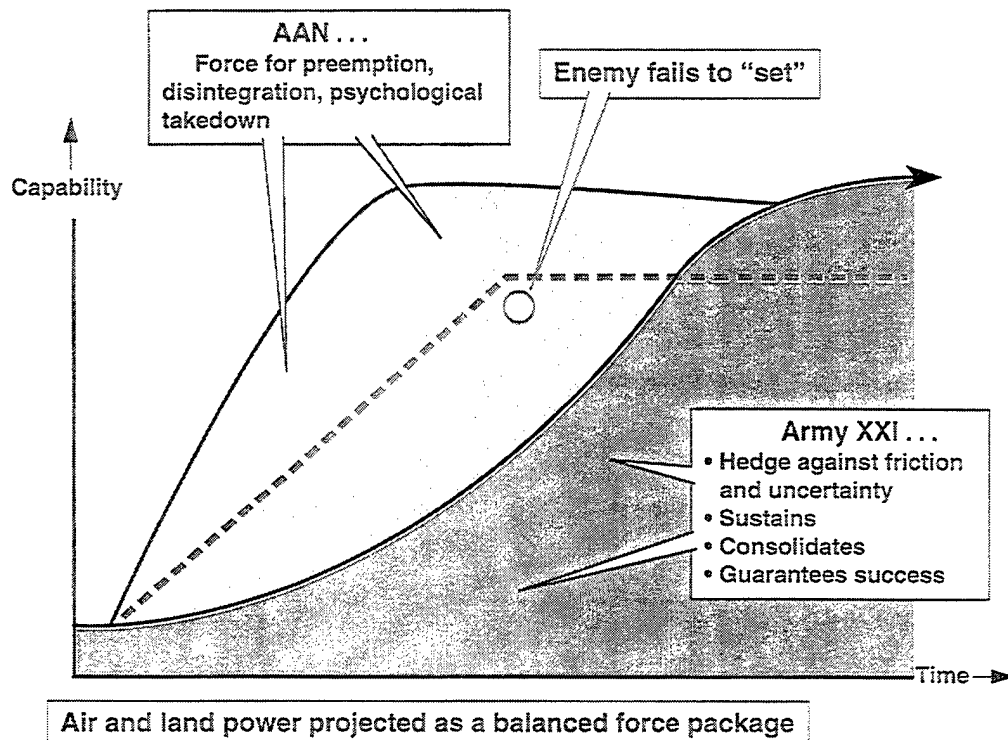
Power Projection Today: Slow Arrival Allows Enemy to "Set": Reaction *vice* Preemption



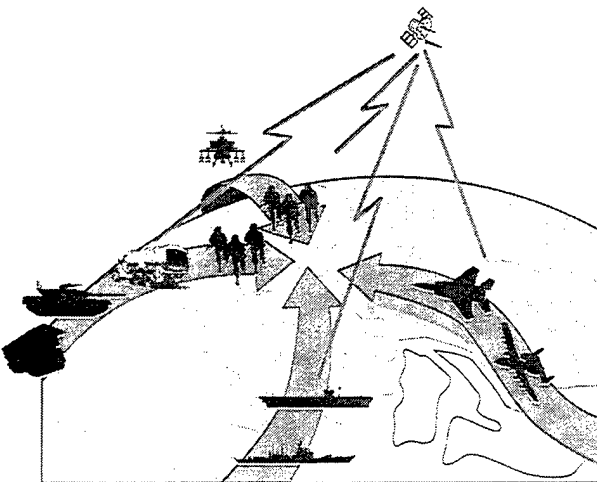
new strategy brief, Jul 97



Power Projection in 2020: Preemption *vice* Reaction



Global Strategic Maneuver - - circa 2025



- Power projection from all points on the globe converge and paralyze enemy
- Simultaneous convergence of overwhelming land, air, space, and sea forces
- Overseas presence quickens global maneuver
- Being "First with the Most" reduces risk and begins process of psychological domination

Seize initiative,
build momentum ... an image of uncontested
competence and unstoppable force

The Goal: A globally self-deployable force capable of striking directly at
strategic and operational centers of gravity



Notions about "Air Mechanization" Continue to Evolve



CH-53
Range: 185 km radius
Fuel for ave insert: 1017 gals
Lift: 30,000 lbs (2 Wiesels)
Wiesel
Crew: 2 Wt: 7900 lbs
Armament: TOW, MK-20,



UH-60L
Range: 584 km radius
Fuel for ave insert: 250 gals
Lift: 8,000 lbs
TACAWS
Crew: 2 Wt: 8,000 lbs
Armament: TACAWS

1978 - Some evidence that Soviets orchestrated successful air mechanized maneuver against Somalis in Ogadan.

1981 - Brigadier Simpkin proposes air mechanization concept based on beliefs that

- increases in mobility will be achieved "more easily and economically...by getting off the ground"
- highly mobile element needs an order of magnitude increase in mobility over the bulk of the force, increasing tempo decreases the time for which ground has to be held.
- Rotor is to track as track is to boot

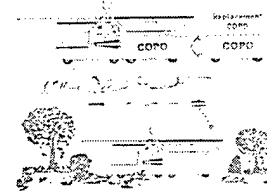
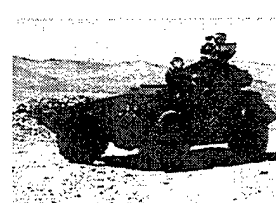
1983 - GEN Von Senger und Etterlin proposes

- need to match "increase in firepower with a significant increase in mobility"
- steps beyond "Air Mobility" to "Air Mechanization"

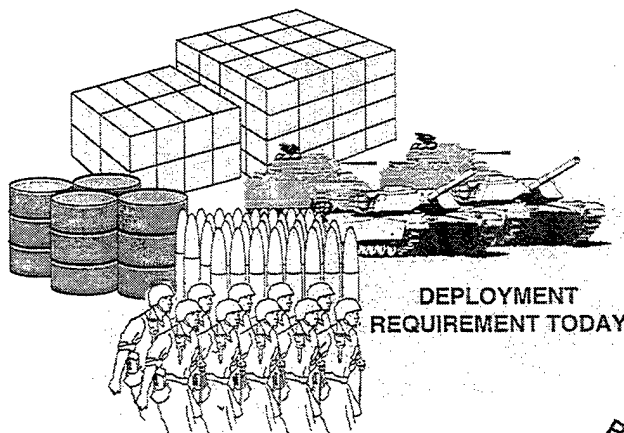
1992 - Col (R) Franz proposes an "air/land vehicle (A/LV) capable of holding ground."



MV-22
Range: 625 km radius
Fuel for ave insert: 425 gals
Lift: 15,000 lbs
Cadillac Gage
Crew: 2 Wt: 15,000 lbs
Armament: 105mm, 7.62, 50 Cal, Tow, MK-20



LOGISTICS: The AAN "Long Pole"

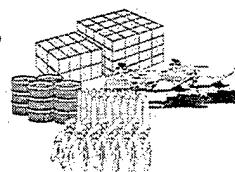


DEPLOYMENT
REQUIREMENT TODAY

Reducing the transportation load enables enhanced mobility and facilitates sustainment

Improved strategic deployability critical to achieving Dominant Maneuver and Precision Engagement

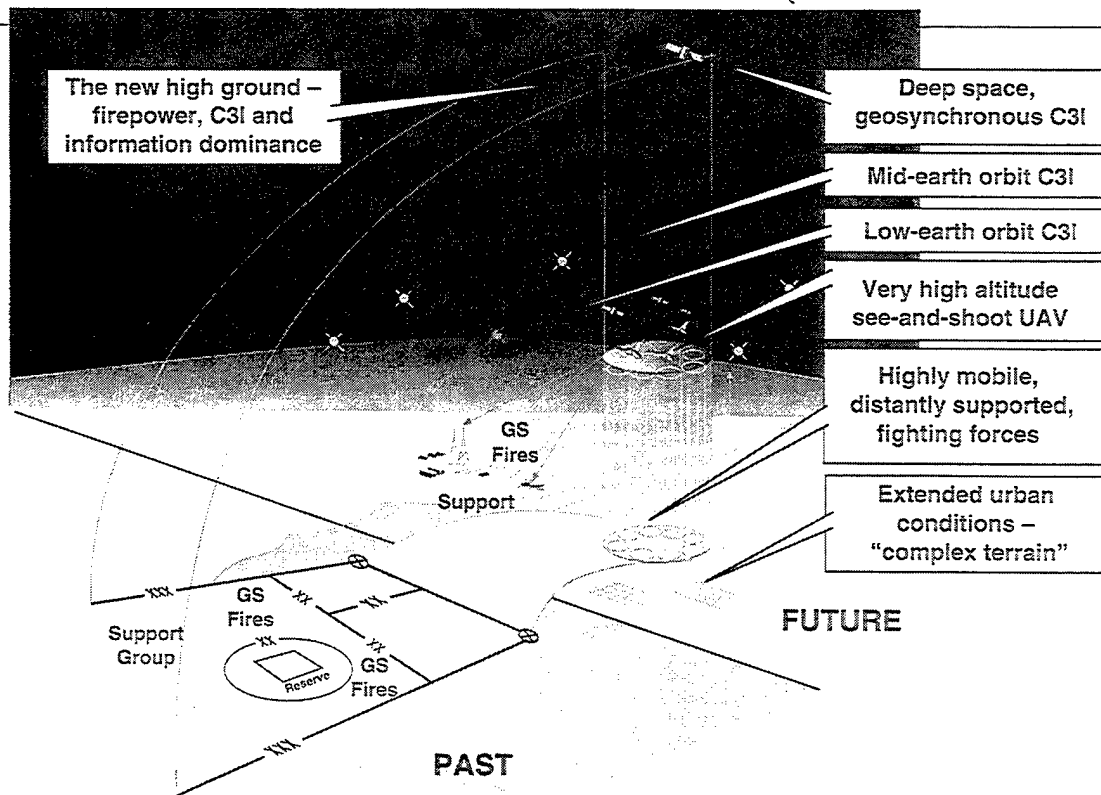
Radical Reduction



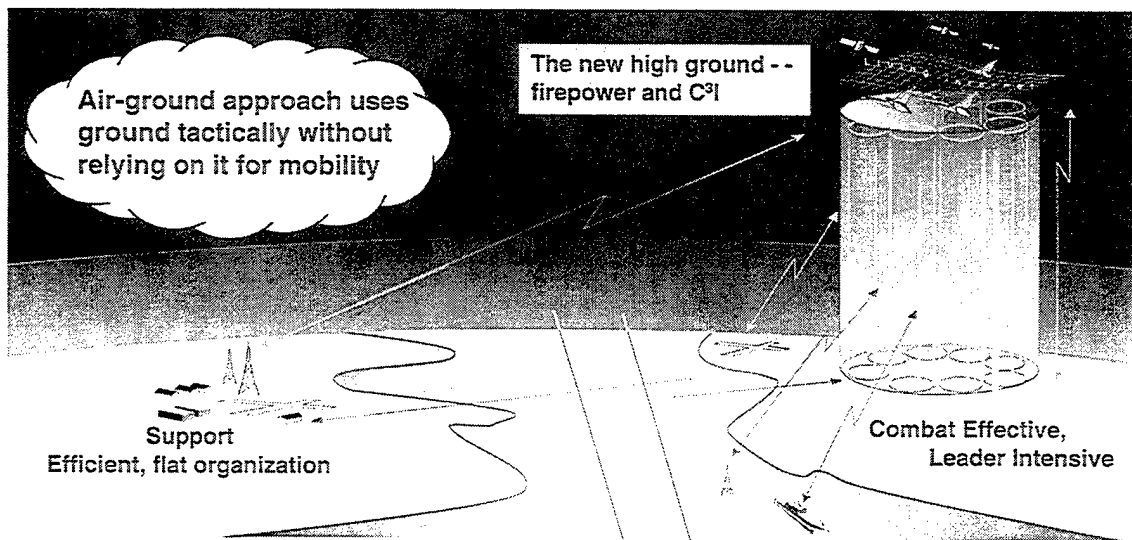
DEPLOYMENT
CHALLENGE FOR 2025



AAN – FROM LINEAR TO VERTICAL



OPERATIONAL CHARACTERISTICS of AAN (20XX) ... A BALANCED APPROACH to WARFARE

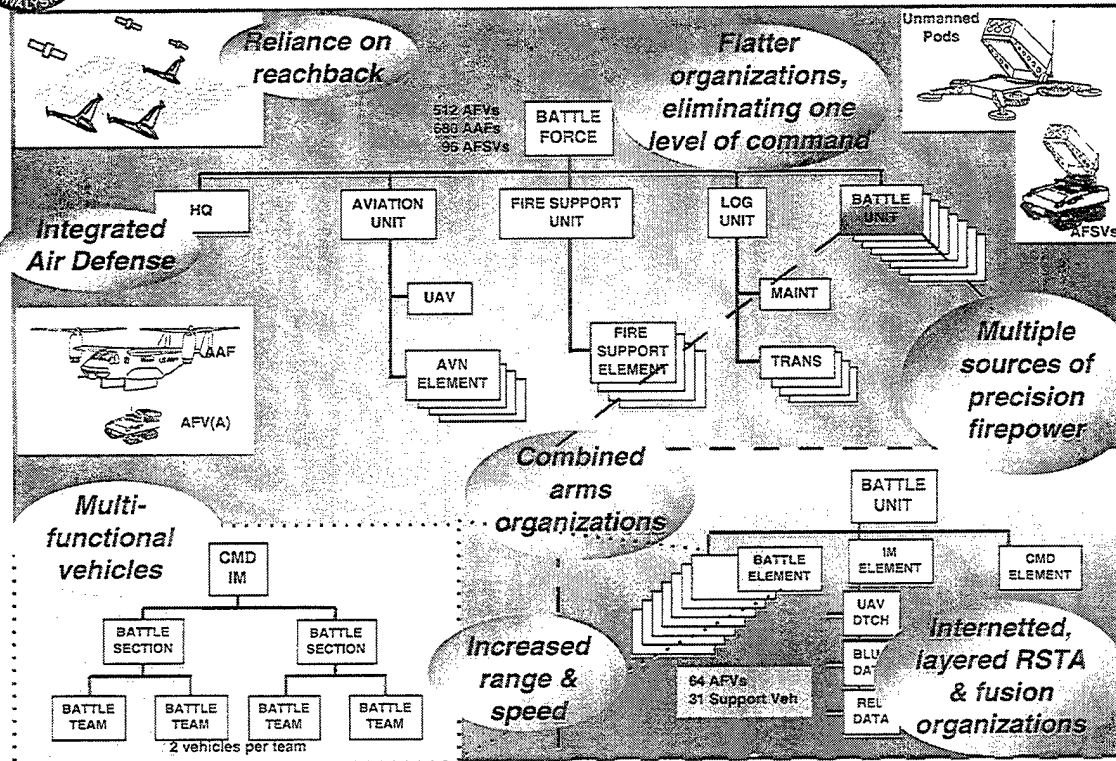


- From joint to interdependence
- Autonomous operations for weeks
- All operating systems resident within battle force
- “Reach out” for combat functions (Fires, C², Logistics)

- Self-protection through movement, organic weapons, low-observables, and situational awareness
- Engage enemy with information, organic, and inorganic weapons
- Pull-Down Data – from the Internet



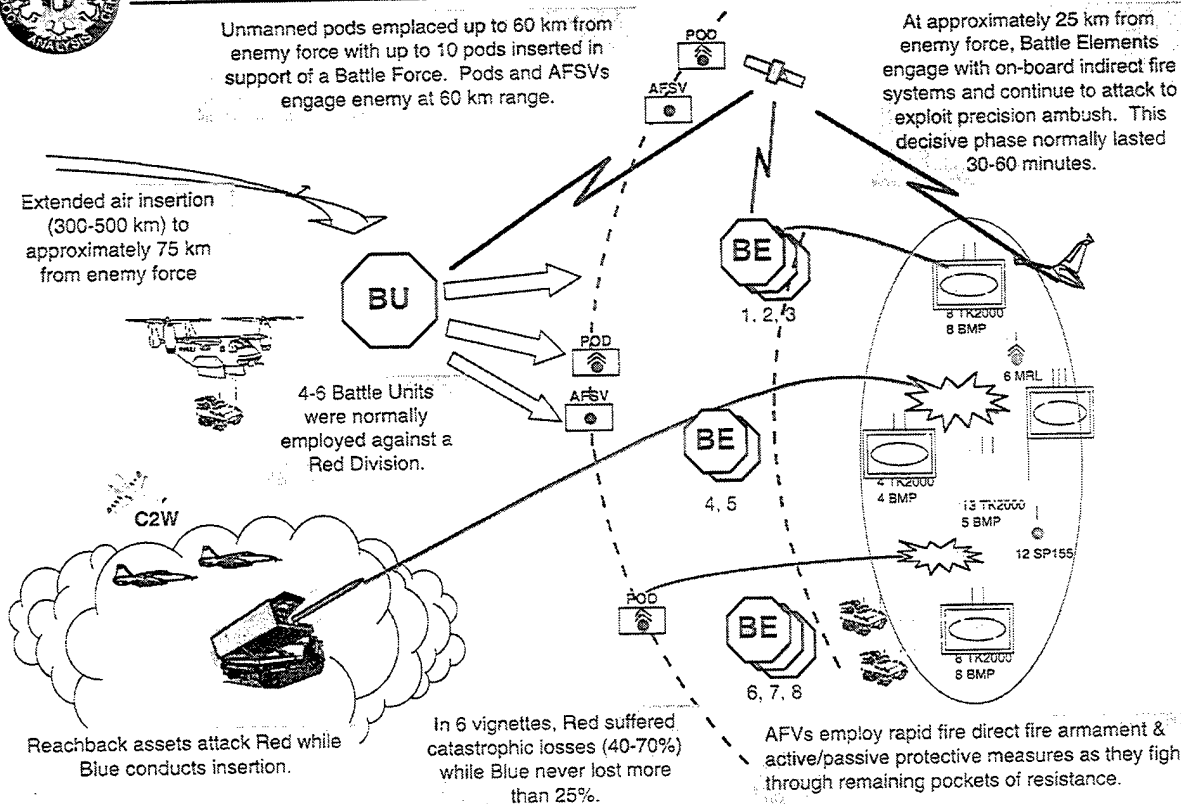
High Risk Battle Force Organization



10



Tactical Concept for Employment of the Battle Unit

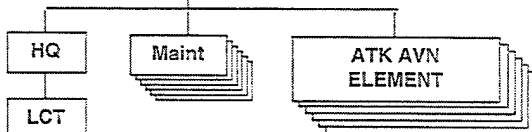


14



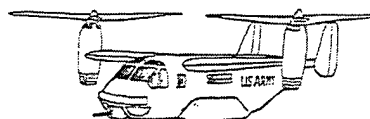
Aviation

Attack

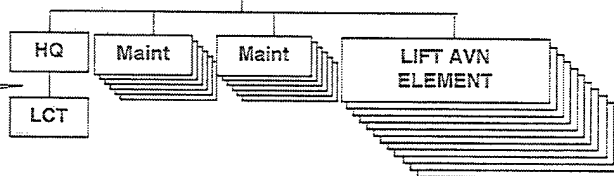


- 72 Advanced Recon Airframes
- Munitions:
 - 50 mm aerial rockets
 - 20 mm gun turret
 - Advanced ATG/ATA capability
- 500 kilometer tactical radius
- 2100 nautical miles strategic self deployment
- 350 knots maximum speed

- 312 Advanced Airframes
- Lifts three Battle Units and associated fire support and RISTA elements
- 500 kilometer tactical radius
- 2100 nautical miles strategic self deployment
- 350 knots maximum speed



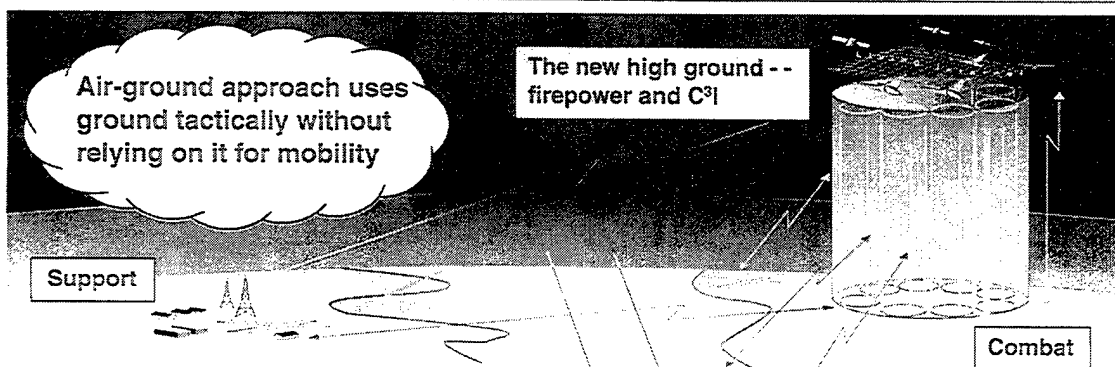
Lift



23



ENABLING AAN: TECHNOLOGIES AND SYSTEMS FOR A BALANCED APPROACH TO WARFARE



AAN TECHNOLOGY SHORT LIST

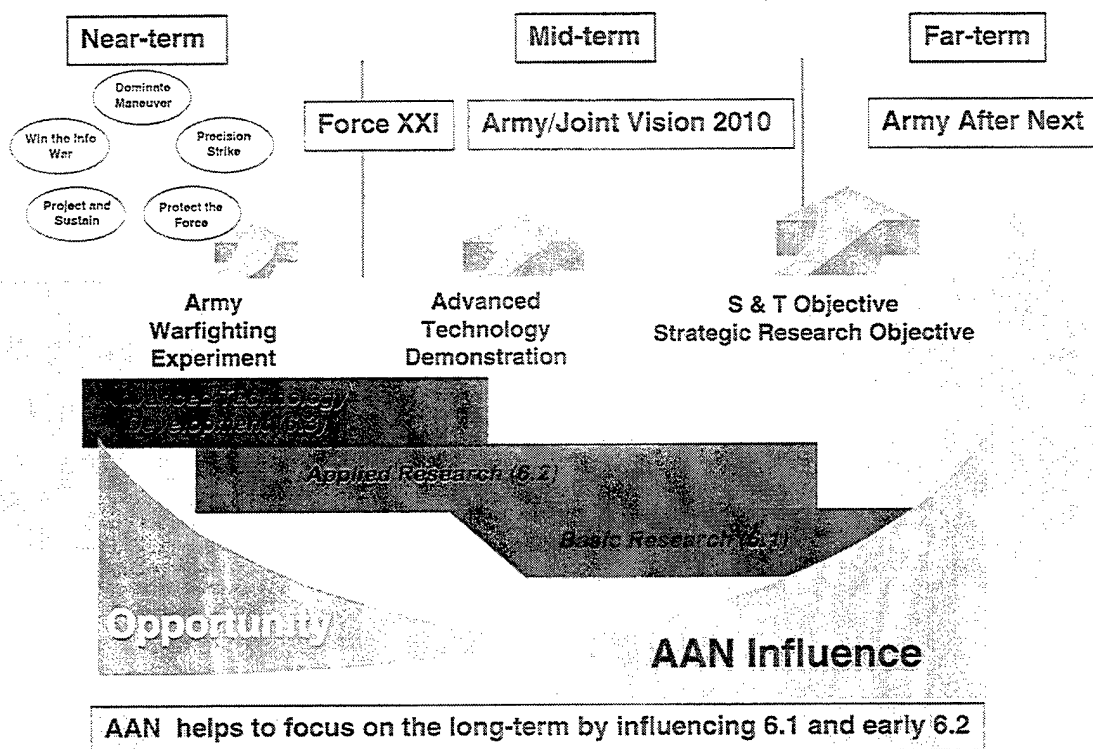
- Hybrid Power Systems
- Fuel Efficiency (Reduce consumption by 75%)
- Human Engineering/Cognitive Engineering
- Signature Control (Including Counters)
- Protection Schemes for Land Systems (Including Active Protection)
- Advanced Materials
- Alternative Propellants
- Biological and Chemical Protection, Antidotes, and Vaccines
- Logistics Efficiencies

AAN SYSTEMS SHORT LIST

- Future Groundcraft
- Advanced Airframe
 - Heavy Lift
 - Tactical Utility Lift
- Autonomous and Semi-autonomous
 - Unmanned Systems (Air, Ground, Sensors)
- Advanced Fire Support System
- "Living Internet"



AAN Influence on S&T Investment Strategy

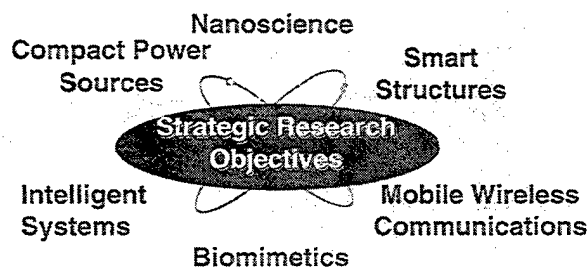


new army brief, p. 92



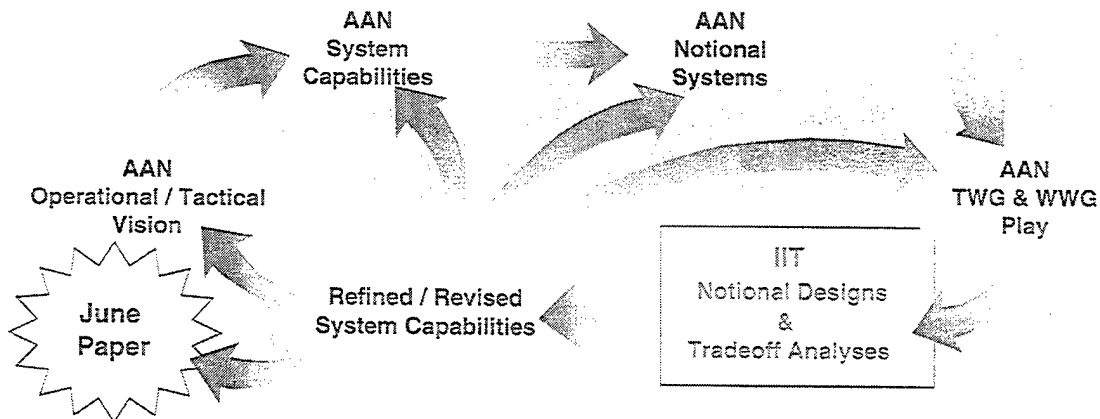
Potential Changes to Existing SROs

- Expand "Mobile Wireless Communications" to include terrain & environment-independent comms, data management
- Ensure that "Biomimetics" addresses lightweight protective materials
- Address unmanned vehicles/robotics concepts in "Intelligent Systems"





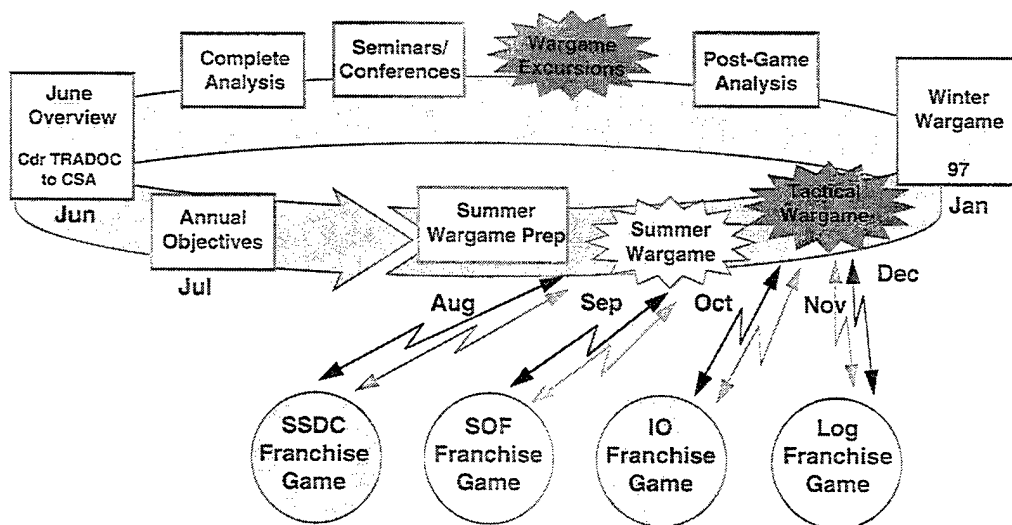
INTEGRATED IDEA TEAMS (IIT): Focus of Army S&T Effort



new army brief, Jul 97



EXPANDING THE PARTNERSHIP

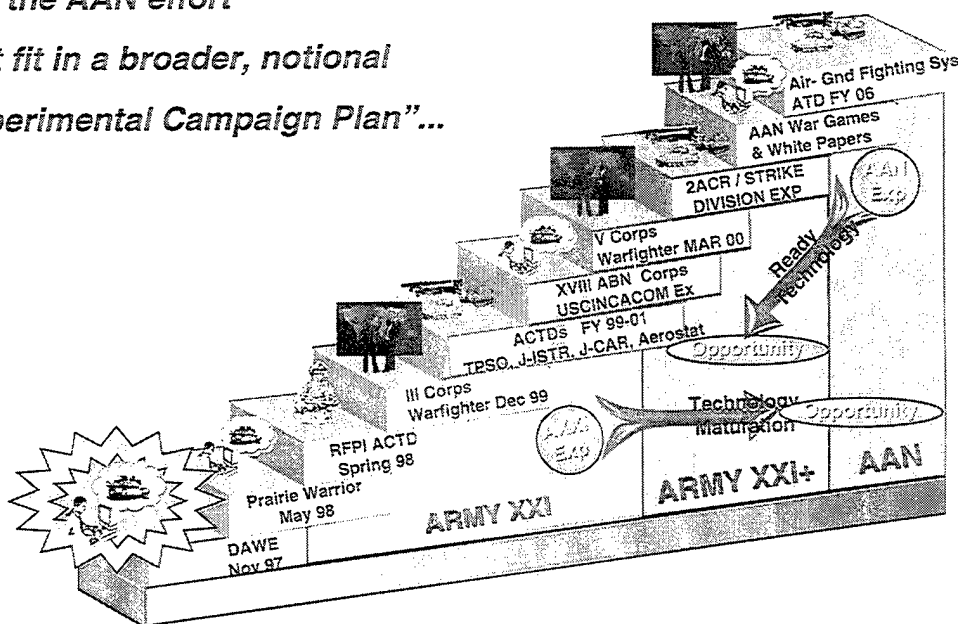


Franchises are AAN organizational partners who have agreed to conduct analytical excursions to further develop specific issue areas as feeds to the AAN wargame process.



Contribution

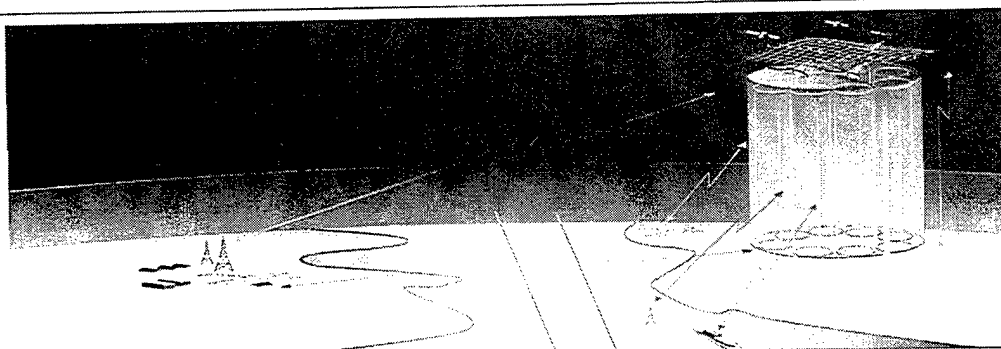
Where the AAN effort
might fit in a broader, notional
"Experimental Campaign Plan"...



5



HUMAN AND ORGANIZATIONAL CHARACTERISTICS OF AAN (2025)



SUPPORT: Focus on Efficiency

Organizational imperatives and processes drawn from civilian/industrial sector

- Flat organizations
- Decentralized management
- Low leader-to-led ratio
- Direct producer-to-user distribution
- Relatively protected
- Individual specialization
- Heavily civilianized/contracted force
- Increased lateral entry

COMBAT: Focus on Effectiveness

Unique military organizations focused on extreme effectiveness and lethality

- High leader-to-led ratio
- Highly trained, multi-skilled soldiers
- Psychological hardening
- Accent on maturity and cohesion
- Long service, low turnover of personnel
- High tooth-to-tail ratio in deployed forces
- Systems designed to limits of human cognition
- Mastery of information

Requires revolutionary change to traditional personnel and management approaches

new army chart, vol 02



Define what we want in the Army After Next so that . . .

- **Force XXI expands to link Army XXI and Army After Next**
- **Force XXI does not get disjointed from long term vision**
- **Also, we must**
 - Focus our R&D efforts
 - Narrow the gap between heavy and light forces
 - Improve mobility, enhance firepower
 - Leverage the work already done in OSD's RMA studies
 - Identify organizational concepts that better integrate AC & RC
 - Revolutionize logistical concepts . . . continue developing total asset visibility & velocity management
 - Institutionalize AAN concepts & process
 - Think joint and involve other services in AAN process

new structure, 14 97



Army Science & Technology Highlights

**ADVANCED PLANNING BRIEFING FOR INDUSTRY
U.S. ARMY AVIATION AND MISSILE COMMAND
REDSTONE ARSENAL, AL
October 21, 1997**

Dr. A. Michael Andrews
Director for Technology
Office of the Deputy Assistant Secretary of the Army
for Research, Development and Acquisition



Topics

- S&T Strategy, Planning, & Processes
- Implementation Approaches -- STOs, ATDs, ACTDs, Fast Tracks
- Army After Next -- S&T Planning
- Summary



Continuing Need for Military Technology

COLD WAR IS OVER:

- We no longer have a near-term peer competitor in technology development or military investment

BUT:

- We no longer can predict where we will fight
 - Force projection is now necessary with tailored forces
- We are more adverse to casualties in regional conflicts
 - Technology overmatch must be maintained
- Relevant technology is more available worldwide
 - High tech asymmetric threats likely



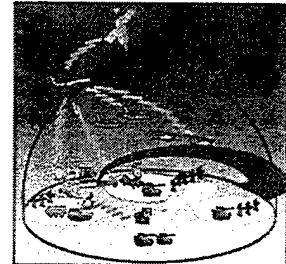
Continued Investment Needed to Maintain Technology Overmatch

slmg1.ppt



S&T is the Foundation of Modernization

- S&T needs to be maintained even with reduced Modernization Budgets.
- Significant tech insertion into existing platforms is essential even if new platforms are not now affordable (new C3, new sensors, new weapons)
- S&T forms the bridge to the future when new platforms will of necessity be built
 - R&D capability cannot be reconstituted quickly
 - Industry is withdrawing from long term investments
- S&T provides hedge against unanticipated threats



Robust S&T is needed to support modernization strategy, maintain overmatch and bring AAN to fruition.

slmg2.ppt



Army Science and Technology Vision

- Timely Demonstrations of Affordable Technology/ Weapon System Concepts That Enable:
 - Decisive Overmatch with Minimum Casualties
 - Force Projection with Full Spectrum Capability
 - Requirements Definition/Prioritization through Experimentation
- S&T That Reduces Cost Through:
 - Early Retirement of Risk in Materiel Development Programs
 - Support for Acquisition Reform
- World Class Network of Army Focused Government and Private S&T
 - Maintain Land Warfare Superiority
 - Leverage Commercial Information Technology
 - Maintain Smart Buyer Capability



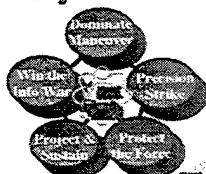
Revolutionary Warfare at a Reasonable Price

STVISNEW.PPT 10/15/97



S&T Investment Strategy

Army Modernization Objectives



Army/Joint Vision 2010



Army After Next

- Strategically mobile
- Avoids attrition warfare
- Protects & sustains itself in a bare-base theater
- Permits simultaneous application of complementary forces
- Expansible

ACTD ATD
DTO STO
ACT II

ATD
DTO STO
ACT II

DTO
STO
SRO

Advanced Technology Development (6.3) [\$418.3M *]

Applied Research (6.2) [\$463.0M *]

Basic Research (6.1) [\$198.9M *]

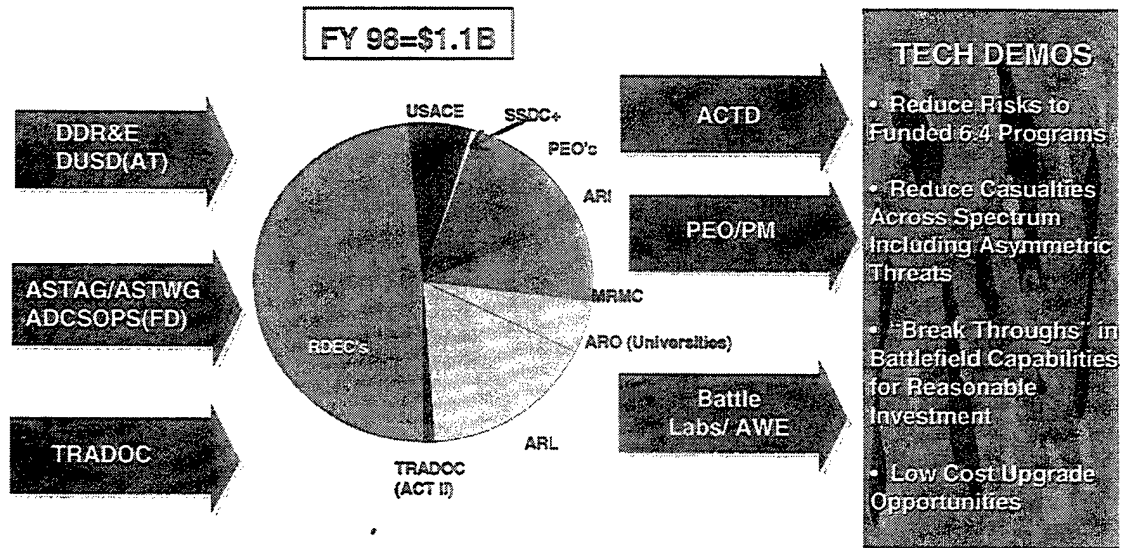
A Strategy Meeting the Challenges of Today...Tomorrow...and the 21st Century

*FY-98\$

STRATINV.PPT



The S&T Enterprise



S&T Provides the Foundation for Future Land Warfare



Army S&T Investment Focus

Then (~1990)

- Independent Efforts
- Competing Contractors
- Broad-Based Technologies
- New Systems & Next Generation Systems

• Now

- Tight Coupling to Transition Opportunities
 - Upgrades
 - Fast Track to Reduce Cost and Time
- Mostly Single Contractors
- Selective Technologies
 - Reliance on Industry, Other Services, and DARPA
- Generation-After-Next Systems
 - Rapid Technology Innovation Drives Experimentation
 - ATDs & System-of-Systems ACTDs



- Major Technology Advance
 - Specific, measurable
 - Achieved by a specific fiscal year
 - Funded in the POM
 - Limited to 200 total STO's
- Reviewed Annually by MATDEVs and TRADOC
- Approved by Army Science and Technology Working Group (ASTWG)
- Provide input to DoD DTO process

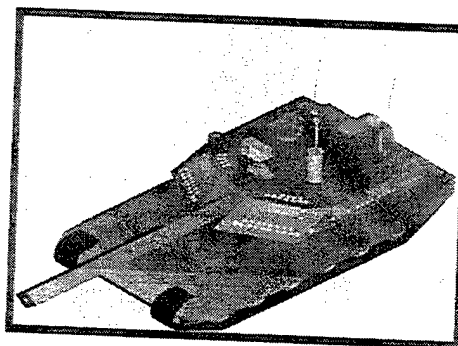
STO's Focus and Stabilize Programs

slcc_101.ppt



Project Objective: Demonstrate small, light weight kinetic energy missile technology to defeat future tank armor and active protection systems for advanced tank threats.

**Provides lethality overmatch
option for Future Combat
System**



Critical To Maintaining Lethal Advantage Over Future Armored Threats

127



Advanced Technology Demonstrations (ATDs)

- Large-scale technology demonstration
- User involvement in all phases
- TRADOC approved exit criteria
- Testing in real or synthetic operational environment
- At least one demonstration at Battle Lab
- Fully funded in POM
- Approved by Army Science and Technology Working Group (ASTWG)

**ATD's Reduce Risk Prior to Full-Scale
System Development**

atdc_101.ppt

10/15/96



Advanced Technology Demonstration (ATD)

Definition:

Risk reducing, integrated proof-of-principle demonstration of advanced technology in an operational environment to assist near-term system developments in satisfying specific operational capability needs for Army modernization.

ATD Support to Army Modernization Objectives

Protect the Force

- Battlefield Combat Identification (FY93-98)
- Objective Individual Combat Weapon (FY95-99)
- Vehicle Mounted Mine Detector (FY95-97)
- Multispectral Countermeasures (FY97-99)
- Mine Hunter/Killer (FY98-01)
- Integrated Biodefense* (FY96-99)

Dominate Maneuver

- Hit Avoidance (FY95-97)
- Target Acquisition (FY95-98)
- Composite Armored Vehicle (FY94-98)
- Intelligent Minefield (FY93-97)
- Precision Guided Mortar Munition (FY94-99)
- Direct Fire Lethality (FY96-00)
- Hunter Sensor Suite (FY94-97)
- ~~Boatcraft Pilot/Associate~~ (FY93-99)
- Air/Land Enhanced Recon & Tgting (FY97-00)
- Future Scout and Cav Vehicle (FY98-01)
- Multifunction Staring Sensor Suite (FY98-01)

Project & Sustain

- Total Distribution (FY94-97)

Precision Strike

- Guided MLRS (FY95-98)
- Indirect Precision Fire (FY98-01)
- Enhanced FOG-M* (FY94-99)

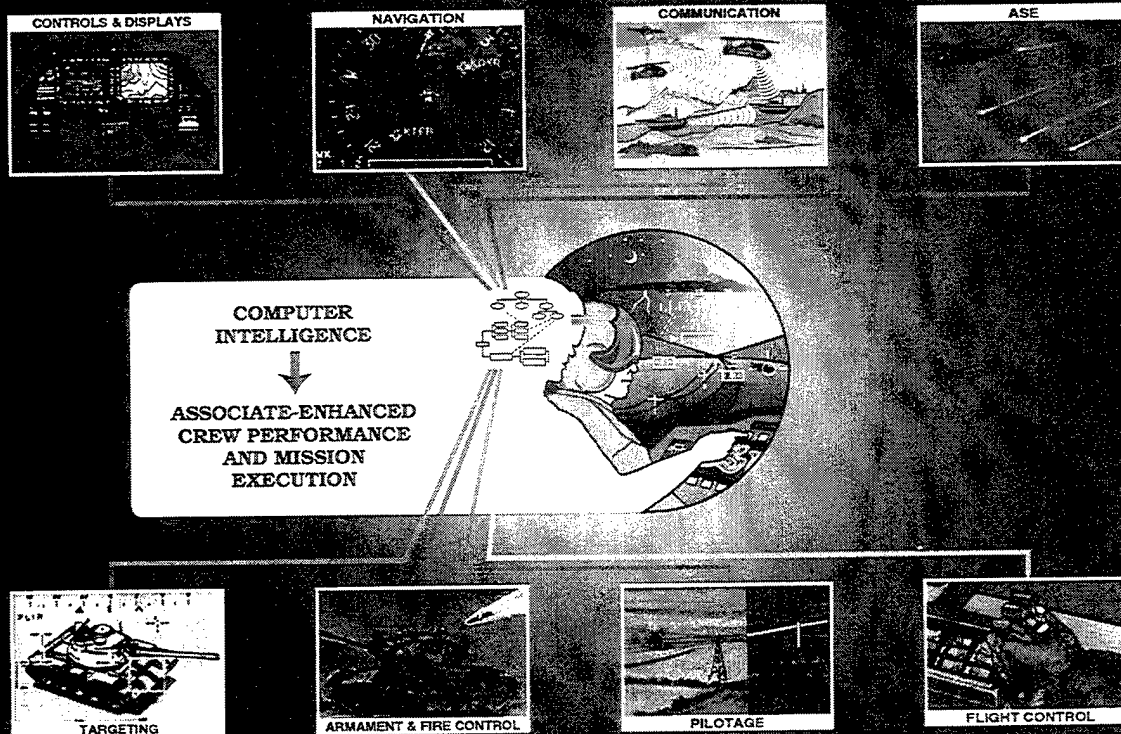
Win Information War

- Digital Battlefield Communications (FY95-99)
- Battlespace Command and Control (FY97-00)

23 Total ATDs

ATDnew.PPT

Rotorcraft Pilot's Associate



104-94-104-3 w/Title



ATD & ACTD Demonstration Objectives

ATD Advanced Technology Demonstration

- Evaluate Technical Performance.

Objectives

- Demonstrate technical feasibility and maturity.
- Reduce technical risks and uncertainty at the relatively low cost of informal processes.

ACTD Advanced Concept Technology Demonstration

- Evaluate Military Value (large scale experiment).

Objectives

- Gain understanding of and evaluate military utility before committing to acquisition
- Develop corresponding concepts of operations and doctrine.
- Rapidly provide operational capability fieldable prototypes (Residual).

10/15/96



Advanced Concept Technology Demonstrations - Army



- CINC Sponsored
- DoD Funding Support

Near Term Contribution to Warfighting Capabilities

SYSTEM OF SYSTEMS/

PRODUCTS

- Rapid Force Projection Initiative	XVIII ABN CORPS
- Rapid Terrain Visualization	XVIII ABN CORPS
- Joint Combat Identification	ACOM
- Joint Precision Strike Counter MRL	US Forces Korea
- Joint Countermine	ACOM
- Joint Logistics	ACOM, CENTCOM, EUCOM
- MOUT	SOCOM
- THEL	Israeli Ministry of Defense
- LOSAT (Proposed)	XVIII ABN CORPS
- TPSO (Proposed)	US Forces Korea
- C4i for Coalition Warfare (Proposed)	EUCOM

WARFIGHTER

- Mission/Capability Oriented
- Integrate Multiple ATDs/ RDECs
- Battle Lab Partner
- Technology & Tactics Together
- Simulation & Field Tests Evaluate Military Worth
- Use Connectivity and Information Technology
- Robust Residuals (Fieldable Prototypes) provided for 2 Years

Providing Warfighting Capability Directly to CINC

10/12/96



Typical ACTD Schedule for Residuals/Leave Behinds

Technical Test

Subsystem and System Tests

Operational Test

Fabricate	Train	FE*	Extended User Evaluation
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Fabricate Additional Leave Behinds

■ RDT&E

■ Procurement

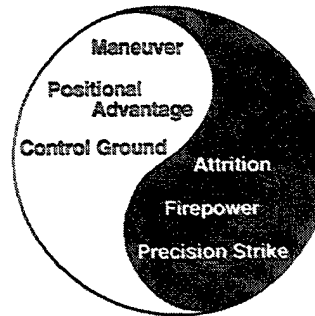
*Field Experiment

With Few Exceptions. All Residuals Are Used in Field Experiment and Extended User Evaluation



Developing the S&T Investment Strategy for AAN

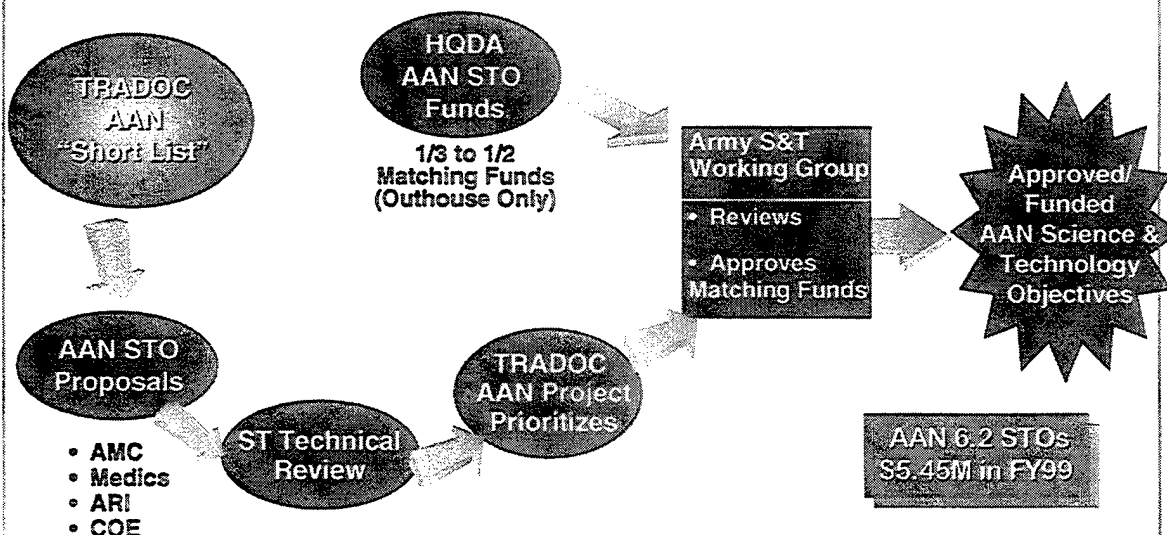
- S&T community supporting AAN process
- Most ongoing 6.1 and 6.2 efforts relevant
- Expect to realign 6.1 (~30%) and early part of 6.2 accounts (~15%)
- Developing new Strategic Research Objectives for 6.1
- Developing Short List of enabling technologies for 6.2 - Areas for *increased* emphasis
- Concentrate on affordable technical approaches



Technology focus on Army-unique long term challenges



6.2 AAN Science & Technology Objectives (STOs)



- STO Enhancement Program Ensures 6.2 AAN Emphasis
- Provides TRADOC AAN role as prioritizer
- Ensures Industry Participation in AAN Efforts



SUMMARY

- **Army S&T Program is Focused on the Warfighter**
- **Demonstrations Evaluate Military Value of New Technologies and Corresponding Concept of Operations**
- **Strong Emphasis on ACTD Approach Assures Rapid Transition of New Capabilities into the Hands of the Warfighter**
- **S&T Investment Enables Technology Evolution to AAN and Maintains Battlefield Superiority**